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ABSTRACTS

FIBERS A

HANDBOOK OF TEXTILE FIBERS. J. G. Cook. Merrow Pub. Co., 276 Hempstead Road, Watford, Herts., England. 1959. 422 p. 15s. (3182)

An outline is given of the history, production, and fundamental properties of important textile fibers in use today. The behavior of each fiber as it affects the nature of its fabrics is discussed.

Natural fibers A1

IMPACT OF WASH-AND-WEAR ON COTTON AGRICULTURE. C. L. Hoffpauir and B. M. Kopacz (So. Reg. Research Lab.). Textile Bull. 85: 31-34 (Sept. 1959). (3183)

HOW TO BUY COTTON. O. K. Nivens (Avondale Mills). Textile Bull. 85: 45-46 (Aug. 1959). (3184)

Changes in methods used in cotton buying due to highly mechanized farm and ginning programs are summarized.

COTTON IN THE LINEN SUPPLY INDUSTRY. J. T. Howell, Jr. Nat. Cotton Coun. of America, Memphis, Tenn. 1959. 29 p. (3185)

This study was conducted during 1958 to evaluate cotton's competitive position in the linen supply industry, to develop information on current and prospective trends in the industry, and to point up opportunities for expanding linen supply sales and increasing cotton utilization through research and promotion activities.

PROPERTIES AND USES OF THE MANMADE FIBERS. Textile Inds. 123: 111-118 (Aug. 1959). (3186)

The chart also includes trademarks and suppliers of the principal manmade fibers. Free reprints are available from Textile Industries, 806 Peachtree St., N.E., Atlanta 8, Georgia.

Manmade fibers A2

VYCRON POLYESTER FIBER. Beaunit Mills. Am. Textile Reptr. 73: 8-9, 34 (July 30, 1959). (3187)

The fiber, processing, yarn, and fabric properties of Vycron are described.

TEXTILE WORLD'S 1959 MANMADE FIBER TABLE. W. G. Ashmore. Textile World 109: 69-88 (Sept. 1959). (3188)

This 1959 revision of Textile World's 1957 manmade fiber table includes up-to-date information on fiber properties and production. Reprints are available at $1.00 each for 1-25 copies, 75¢ for 26-50 copies, 60¢ for more than 50 copies, from Textile World, 330 W. 42 St., New York 36, N.Y.

DIRECTORY OF U. S. MANMADE FIBER PRODUCERS. Textile Organon 30: 139-145 (Sept. 1959). (3189)

Information is given on executive and sales offices and on plant locations. Trademarks will be listed in a future issue. Producers are classified under the new generic name style of the Federal Trade Commission.

MODERN TEXTILES MAGAZINE TABLES OF DENIER NUMBERS AND FILAMENT COUNTS OF U. S. MANMADE YARNS AND FIBERS, 1959. H. G. Janner. Modern Textiles Mag. 40: 87-96 (Sept. 1959). (3190)

These tables have been revised and brought up-to-date so as to present the most recent data on denier numbers and filament counts of manmade filament yarns and staple fibers manufactured in the United States. Addresses of yarn producer sales offices are also given. Reprints are available at nominal cost from Modern Textiles Magazine, 303 Fifth Ave., New York 16, N. Y.

REVIEWS ON NEW SYNTHETIC FIBERS. J. Soc. Textile Cellulose Inds. Japan 15, No. 5: 339-367 (1959). In Japanese. Through BCIRA 39: 2614 (1959). (3191)

Kashmilon, by Y. Harigaya, p. 339-348; Polyethylene fibers, by K. Hoshino and Y. Urata, p. 348-353; Teviron, by J. Shimeha, p. 354-361; Alon, by T. Kawakami, p. 361-367.

BEHAVIOR OF THE POLYESTER FIBER DIOLEN WHEN SUBJECTED TO THERMAL AND CHEMICAL INFLUENCES. W. Brennecke and H. Richter. Melliand Textilber. (English ed.) 40, No. 3: 194-202 (1959). (3192)

Results of the effects of acids, alkalis, ammonia, oxidizing agents, reducing agents, mineral oils, fats, greases, phenols, cresols, metal salts, and heat on the strength and elongation of Diolen are presented. Graphs, tables, 8 refs.

NEW MARKETS WITH MANMADE FIBERS. J. Campbell. Modern Textiles Mag. 40: 65-80 (Sept. 1959). (3193)

New developments in the use of manmade fibers in home furnishings, industry, womenswear, and menswear are described. Photos.

NEW SYNTHETIC FIBERS. PART 4. E. Frieser. Z. ges. Textil-Ind. 61, No. 8: 302-305 (1959). In German. Through BCIRA 39: 2613 (1959). (3194)

In supplementation of the previous articles (abstr. 725/59 and 1973/59), the author discusses mixed polymerizate fibers from polyacrylonitrile and polyvinylidene chloride (Zefran); the polyester fiber from vanillin for the production of which (500 kg/day) a pilot plant has been erected by the Kokoku Rayon & Pulp Co. Ltd in Tokyo; new polyamide fibers on the basis of m-xylene diamine; the cellulose thiourethane fiber; polyolefin (polypropylene) fibers, and polymethylene sulfone fibers.

GLASS AS A TEXTILE FIBER. G. G. Garrett (Sherborne Silk Mills). Textile Merc. 141: 178-179, 181-182 (Aug. 7, 1959). (3195)

A concise account of the history, development, production, and uses of glass as a textile fiber. A table listing its physical properties is included. Photos, table.

USES AND DEVELOPMENT OF TRICEL STAPLE. J. Smithies and J. M. Cysary (Courtaulds Ltd). Textile Mfr. 85: 314-316 (July 1959). (3196)

The properties of Tricel and the uses for which it is suitable are briefly noted, followed by a discussion of opening, blending, and carding techniques on the woolen and worsted systems, factors in designing and weaving, dyeing and finishing, heat setting and pleating techniques.

ALON: JAPANESE MANMADE FIBER. R. W. Moncrieff. Fibres 20: 269-272 (Aug./Sept. 1959). (3197)

This article describes the manufacture, chemical composition, properties, and end uses of Alon fibers made by Toho Rayon Co. Ltd. Alon is made by spinning in the conventional way a viscose rayon staple fiber and then acetylating it. 2 refs.

YARN PRODUCTION B

BEFAMA SMALL SCALE SPINNING MACHINERY. Befama, Poland. Can. Textile J. 76: 59-60 (July 24, 1959). (3198)

The set of machines described is composed of an opening machine, one nonautomatic carding set, one small single-sided ring spinning frame, and, if needed, a single-sided ring twisting frame. The main difference between these machines and normal capital units is their working width and simplicity of design.

CLEANING METHODS IN SPINNING MILLS. PART 6. CHARACTERISTICS OF THE CIRCULAR SUCTION NOZZLE. Y. Niitsu, S. Fujimori, and K. Hosokawa. J. Textile Machy. Soc. Japan 12, No. 5: 36-45 (1959). In Japanese (English summary). Through BCIRA 39: 2676 (1959). (3199)

PROCESSING OF COTTON/KAPRON BLENDS. A. M. Sporyshev. Tekstil. Prom. 19, No. 1: 27-31 (1959). In Russian. Through BCIRA 39: 2679 (1959). (3200)

Experiments showed that a blend of cotton with 30% Kapron can be successfully processed on existing equipment. The breakage frequency of the yarn during spinning is about 130-140/1000 spindles per hr.

TEST SPINNINGS IN THE THREE- AND FOUR-ROLLER SPINNING MILL. H.-P. Hartenhauer. Deut. Textiltech. 9, No. 4: 199-202 (1959). In German. Through BCIRA 39: 2677 (1959). (3201)

The test spinning method described would enable spinning mills to spin small sample batches for studying the quality of a given raw material. The method can be used for both cotton and chemical fibers and their blends.

SHIRLEY MINIATURE SPINNING PLANT. Platt Bros. Ltd. Platts Bull. 9, No. 8: 237-244 (1959). (3202)

The Shirley miniature spinning plant consists of a card, drawframe, and ring spinning frame, each equipped with its own self-contained motor. It will spin yarn from little more than an ounce of raw stock, the whole procedure taking about 1 hr. Its features and processing procedure are described, and the results obtained are evaluated. Photos, tables.

Opening, picking, fiber preparation B1

CONTINUOUS FLOW CLEANING LINE. L. Platt (Saco-Lowell Shops). Textile Bull. 85: 43-50 (Sept. 1959). (3203)

The results of tests using an F7 feeder, No. 15 opener cleaner, and No. 17 opener cleaner in sequence are reported. Photos, graphs, tables.

CHARTS HELP CONTROL PICKER-LAP VARIATION. E. R. Beckner. Textile World 109: 62-63 (Sept. 1959). (3204)

Uneven picker-lap weights can be reduced to a minimum by the use of a series of frequency-distribution charts based on the actual lap weights. Graphs.

AIR-BRUSH DOFFER. M. Mayer, Jr. and J. I. Kotter (So. Reg. Research Lab.). Textile Inds. 123: 123-124 (Aug. 1959). (3205)

This article describes the new air-brush doffer for opener cleaners, which combines air blast and mechanical brush actions to efficiently open and doff two processing cylinders simultaneously, and to supply the air necessary for conveying textile fibers to a subsequent process. Diagrs, 2 refs.

TEMAFA TELESCOPIC CYCLONE. K. Müller. Melliand Textilber. (English ed.) 40, No. 3: 164 (1959). (3206)

The Temafa apparatus is a telescopic cyclone or traveling cyclone, which is designed for use in the blending of large lots in long chambers. Its construction and operation are briefly described.

MECHANISM OF A PNEUMATIC ANALYZER AND ITS FLUID DYNAMIC FUNCTIONS. PART 1. S. Yamawaki and G. Hirose. J. Textile Machy. Soc. Japan 12, No. 5: 15-23 (1959). In Japanese (English summary). Through BCIRA 39: 2647 (1959). (3207)

A pneumatic analyzer (Japanese Patent 248 962) is highly effective for opening, cleaning, and separating fibers. Its function has been examined from the standpoint of fluid dynamics.

MASSIVE BLENDING AS A MEANS OF LEVELING OUT COTTON'S VARIABLES. D. E. Howe (Am. Thread Co.). Textile Bull. 85: 33-34, 72 (July 1959). (3208)

A spectacular reduction in variable color of yarn, uniformity of fiber fineness which is twice as good as before, ends-down at spinning appreciably lower and less variable, lower neps, reduced clearer waste, and less variable yarn strengths are among the advantages cited for massive cotton preblending. Diagr, graph, table.

Carding and combing B2

RECTILINEAR COMBING FOR SHORT, FINE WOOLS. Can. Textile J. 76: 58 (Sept. 4, 1959). (3209)

REDUCTION OF FLY ON CARDING MACHINES. I. M. Khatenever. Tekstil. Prom. 19, No. 3: 55-56 (1959). In Russian. Through BCIRA 39: 2651 (1959). (3210)

Experiments showed that fly formation, especially when working at high speeds, can be eliminated by gluing to the inner edge of the cylinder a strip of cloth which projects about 5-6 mm beyond the edge and seals the clearance. This makes it possible to increase the productivity of the machine by 8%, owing to the improved utilization of its width and increased effective working length of the flat (by 80 mm, 40 mm on each side).

HIGH-GRADE YARNS FROM LOW-GRADE COTTON. Textile Inds. 123: 119-122 (Aug. 1959). (3211)

By including low-noil, high production Upsheen combers in the carded yarn organization, good weaving and knitting yarns may be made from a low grade cotton with only a slight increase in cost. Photos, diagrs, table.

EQUALIZATION OF CARD SLIVERS. G. V. Dzhokharidze. Tekstil. Prom. 19, No. 1: 34-37 (1959). In Russian. Through BCIRA 39: 2654 (1959). (3212)

FIBER TRANSFER ACTION OF ROLLERS IN A CARDING MACHINE. PART 1. S. Yamawaki and K. Fujino. J. Textile Machy. Soc. Japan 12, No. 5: 6-14 (1959). In Japanese (English summary). Through BCIRA 39: 2652 (1959). (3213)

Experiments have been made on a model machine, the collecting power being calculated on the basis of weighted values of fiber layer thickness on the rollers. When metallic wire is used the collecting value grows continuously as the feed increases, but with card cloth there is a discontinuous change. Collecting power is not greatly affected by the gage between two interacting rollers and is mainly influenced by their peripheral speed ratio.

UPGRADING COTTON ON HARTFORD COMBER. Platt Bros. Ltd. Platts Bull. 9, No. 8: 245-253 (1959). (3214)

By upgrading, i.e. combing at high productions with low waste extraction, the characteristics of any given cotton may be improved. The new Hartford comber is designed for high quality combing at waste extractions from 25% down to 6%. Examples are given to compare the quality of upgraded cotton and carded cotton from cheap stock. Diagrs, graphs.

RECONSTRUCTION OF THE CARDING MACHINE ChT-21-Sh. V. P. Varzha and A. A. Piktis. Tekstil. Prom. 19, No. 2: 71-73 (1959). In Russian. Through BCIRA 39: 2650 (1959). (3215)

NEEDLE POINTING IN CARD CLOTHING. Textile Inds. 123: 89-90 (Sept. 1959). (3216)

Notable improvement in the carding operation has been reported by 3 mills which are using recently developed Micr-O-Grind head card grinding equipment that produces sharp, needle-like points on the wire. Photo.

WOOL CARD STRIPPING: SURVEY OF CURRENT MILL PRACTICES. Textile Inds. 123: 98-99 (Sept. 1959). (3217)

Photos.

CARD-GRINDER TRAINING: HOW TO CLOTHE CARDS. Textile World 109: 56-58 (Sept. 1959). (3218)

Pictures and captions are used to explain the procedures.

CARD OF THE FUTURE. G. Guggenheim. Textile Bull. 85: 29-30 (July 1959). (3219)

The design and performance of a future hypothetical card are described. Diagr.

TECHNIQUE IN WOOLEN CARDING. E. I. Baxter and A. Brearley. Textile Recorder 77: 58-59, 69 (July 1959). (3220)

The various types of carding sets in present use are described, and results obtained from different sets, with emphasis on variations between single stripper and tape condensers, are discussed. Photos, table, 7 refs.

Drawing and roving B3

PRACTICAL TENSION REGULATION AT ROVING FRAMES. G. Porsche. Spinner u. Weber 77: 971-977 (Sept. 1959). In German and in English. (3221)

The improved double-apron drafting system now in use at the ring spinning frames makes possible drafts up to 50; therefore the roving is mostly fed to the spinning frame after having passed only one passage at the roving frame. For finer counts, only one more passage is inserted between high draft roving frame and ring spinning frame. In any case, there is no further doubling for which reason this abbreviated spinning system is the more sensitive to variations of the roving. Tension of the roving at the roving frame therefore must be even better adjusted and kept constant. Diagrs.

MAGNETIC DRAFTING SYSTEM. V. A. Burnham (Saco-Lowell Shops). Can. Textile J. 76: 53-56 (July 10, 1959). (3222)

The steps leading to the development of the MagneDraft system, the principle of its construction, its operation, and its advantages are described. Photos.

AUTO-EVENER SLIVER REGULARITY CONTROL DEVICE. O-M Spinning Mach. Mfg. Co. Ltd. Textile Merc. 141: 229, 232-233 (Aug. 21, 1959). (3223)

The structure and operation of a pin drafter equipped with the Auto-Evener are described, and a comparison of results obtained on a pin drafter before and after using the device is included. Diagrs.

EXPERIMENTAL STUDY ON THE DYNAMIC MODULUS OF TWISTED SLIVER IN THE LOW FREQUENCY RANGE. S. Kinoshita and T. Namikata. J. Soc. Textile Cellulose Inds. Japan 15, No. 5: 396-400 (1959). In Japanese (English summary). Through BCIRA 39: 2662 (1959). (3224)

The effects of tension and twist were investigated (spun rayon sliver, 20 cm lengths, 0.38 g/cm) by means of a damped oscillation (pendulum) method (0.5 c/s). With fixed twist (0-6 turns per 20 cm length), the modulus of elasticity, coefficient of viscosity, and energy loss increased with applied load (0-50 g), and vice versa.

EFFECTS OF DRAFTING ON FIBER ORIENTATION. PART 5. K. Fujino and W. Itani. J. Textile Machy. Soc. Japan 12, No. 5: 28-35 (1959). In Japanese (English summary). Through BCIRA 39: 2661 (1959). (3225)

By assuming quasi-ideal slivers in which the length and orientation of the fibers are equal and their projections to the axis of the slivers are uniformly arranged, the distribution of mean velocity and of the velocity change point can be theoretically expressed. The formulas derived have been compared with values on slivers of different degrees of fiber orientation.

IMPORTANCE OF CAN DIMENSIONS IN COTTON SPINNING MILLS, WITH SPECIAL REFERENCE TO DRAWFRAMES. R. Klinke. Z. ges. Textil-Ind. 61, No. 9: 329-334 (1959). In German. Through BCIRA 39: 2659 (1959). (3226)

Time studies are made to analyze the effect of can dimensions on the course of work in cotton spinning mills, reference being made particularly to the performance of modern drawframes. The choice of can dimensions (9, 12, 16, or 18 in. diameter) is a problem of transporting the material between machines, and it affects essentially the workload of the employee and the productivity of the machine.

ELECTRICAL DRAWFRAME CLEANING DEVICE AS MEANS FOR INCREASING PRODUCTION. H. Schumann. Deut. Textiltech. 9, No. 4: 207-209 (1959). In German. Through BCIRA 39: 2658 (1959). (3227)

Experiments are described to show that mechanical drawframe cleaning has considerable advantages over the manual process by increasing the productivity and facilitating the work of the ring spinner. Directions are given for the manipulation and maintenance of the electrical drawframe cleaning device described.

COLLECTOR DRAWFRAME: DEVELOPMENT AND TESTING. K. Schmauder and K.-P. Mieck. Deut. Textiltech. 9, No. 3: 120-123 (1959). In German. Through BCIRA 39: 2657 (1959). (3228)

The development of a worsted yarn drawframe is reported, in which an additional zone for gripping the fiber ends projecting from the fiber system is allotted to the delivery element. Experiments have confirmed that the breakage frequency of yarns produced with the new drawframe is considerably reduced, while their quality, strength, elongation, and regularity are equal, if not superior, to those produced on the usual drawframe. The new construction and its manipulation are simple.

MODEL IR HIGH SPEED INTERSECTING GILL. H. Kittel. Melliand Textilber. (English ed.) 40, No. 3: 150, 152 (1959). (3229)

The constructional details of the single head, high speed intersecting gill are described. Photos, diagrs.

EXPERIENCES WITH SHIRLEY RS METER. W. F. Du Bois. Tex 18, No. 4: 418-427 (1959). In Dutch. Through BCIRA 39: 2663 (1959). (3230)

The mechanism of the meter is described, and some experiments are reported to prove the reliability of the meter for measuring the relative speed between rollers. The relationship between roller slip on a drawframe, sliver regularity, and weight applied to the top rollers is discussed.

Spinning, winding, twisting B4

WHAT SPINNING DRAFT DOES TO YARN. PART 2. DOUBLE ROVINGS. J. Simpson and C. L. Sens (So. Reg. Research Lab.). Textile Inds. 123: 100-103 (Sept. 1959). (3231)

The effect of spinning draft using double rovings of short, medium, and long staple cotton over the complete range of drafts on the Whitin Casablanca long draft and Saco-Lowell SS-2 Shaw systems was studied and compared with comparable tests done with single rovings (see abstr. 2313/59). The results showed that the advantages of spinning from single or double rovings depend on the spinning draft required for each. Graphs, 5 refs.

DOUBLE APRON DRAFTING SYSTEMS FOR COTTON SPINNING MACHINES AND MEANS FOR IMPROVING THEIR PERFORMANCE. E. V. Shmakov. Tekstil. Prom. 19, No. 1: 65-69 (1959). In Russian. Through BCIRA 39: 2671 (1959). (3232)

The efficiency of double-apron drafting systems increases with increasing width of the apron at the same specific weight per area unit, an apron width of 34 mm giving improved quality and strength uniformity of the yarn.

LUBRI-CASE TREATED SPINNING RINGS AND HIGHER TRAVELER SPEEDS. J. Foard (Kluttz Rings Inc.). Textile Bull. 85: 57-58 (Aug. 1959). (3233)

The Lubri-Case treatment and its advantages in making higher traveler speeds possible are discussed.

HIGH DRAFT BALMES SYSTEMS FOR RING SPINNING. Balmes Ltd. Textile Weekly 59(2): 56 (Aug. 14, 1959). (3234)

The Balmes high draft system has been designed for spinning from intermediate or slubber with either single or double creel supply. Two distinct arrangements of the Balmes drafting system can be supplied, the roller arm arrangement and the spring saddle arrangement. The latter is particularly applicable for conversion of existing ring frames, since it permits the use of existing parts, thus reducing the cost of conversion. Diagrs.

HOW TO GET THE BEST FROM RING FRAMES. Platt Bros. Ltd. Platts Bull. 9, No. 8: 217-236 (1959). (3235)

This article provides methods of calculating the practical maximum spindle speeds which can be attained from a knowledge of the count and strength of the yarn to be spun. It also gives a method of estimating optimum traveler weights for any given spinning conditions. Photos, graphs, tables.

EFFECTS OF SPINDLE, RING, AND TRAVELER ON OPTIMUM VELOCITY. J. Böttcher and H. Baldauf. Deut. Textiltech. 9, No. 3: 124-127 (1959). In German. Through BCIRA 39: 2669 (1959). (323

It is shown that (1) standardization of spindles, tube lengths, and ring diameters is essential for obtaining the best running properties on ring spinning machines; (2) the ratio d : D (mean diameter of upper spindle portion : mean spinning-ring diameter) should be 0.45 for coarse counts and 0.50 for fine counts; (3) the PS-rings (profiled steel rings with plastic base) are superior to ordinary steel rings; (4) it is necessary to pay more attention to the condition of the rings and correct choice of traveler number.

EFFECT OF CARBON CONTENT OF THE RING ON THE FRICTION AND WEAR OF RING AND TRAVELER. K. Kanai, H. Kanai, and H. Kubota. J. Textile Machy. Soc. Japan 12, No. 5: 49-52 (1959). In Japanese (English summary). Through BCIRA 39: 2668 (1959). (3237)

The carbon content, varied from 0.55 to 0.9%, has no great effect.

USE OF DOUBLE- AND SINGLE-TWIST SPINDLES FOR TWISTING HIGH-TWIST PERLON FILAMENT AT 1000 REV/MIN. W. Gerhardt. Deut. Textiltech. 9, No. 3: 127-130 (1959). In German. Through BCIRA 39: 2683 (1959). (3238)

Examination is made of the conditions, as well as advantages and disadvantages, observed during twisting of fine Perlon filament by means of single- and double-twist spindles. The results are tabulated.

LESS YARN LICKING DURING DOUBLING. G. Porsche. Melliand Textilber. 40, No. 5: 490-492 (1959). In German. Through BCIRA 39: 2680 (1959). (3239)

The main yarn-delivery systems on doubling machines are briefly reviewed, and the possibilities of eliminating or at least reducing the number of yarn faults due to licking are pointed out. Comparison is made in particular between the Stockport and the Nottingham delivery systems.

HEAVY-DUTY TWO-FOR-ONE TWISTING UNITS. Ernest Scragg & Sons Ltd. Textile Merc. 141: 202-203 (Aug. 14, 1959). (3240)

The SDT4 and SDT8 incorporate the Westmorland double-twist spindle and are suitable for jute and heavy carpet yarns, continuous filament yarns, and tire cords. They produce packages up to 8 lb. at high speed. Photos.

HIGH EFFICIENCY FALSE TWISTING MACHINE FOR THE PRODUCTION OF HELANCA YARN. H. Klay. Textil-Rundschau 14, No. 4: 170-175 (1959). In German. Through BCIRA 39: 2681 (1959). (3241)

Characteristic features and constructional details are given of the improved machine developed by Heberlein & Co. AG.

BALLOON CONTROL RINGS FOR RING SPINNING AND DOUBLING FRAMES. G. Hanke and G. Zick. Melliand Textilber. (English ed.) 40, No. 3: 154-162 (1959). (3242)

The problems arising when equipping existing machinery with balloon control rings are discussed, with emphasis on factors affecting the choice of the most suitable shapes and positions. Diagrs, 6 refs.

ROLL SLIPPAGE CAUSES VARIATION IN YARN. N. H. Pomfret. Textile World 109: 51, 205-206 (Sept. 1959). (3243)

The causes and effects of drafting roll slippage are explained. Diagr.

TENSION CONTROL IN WINDING. PART 3. D. Brunnschweiler. Textile Recorder 77: 63-65 (July 1959). (3244)

The effects of package build, yarn sloughing-off characteristics, bare tube and full package diameter, and bobbin lift on yarn tension are discussed. Photos, graphs.

Yarns B5

STRUCTURE OF CONTINUOUS FILAMENT YARNS. G. Riding (Brit. Rayon Research Assoc.). Textile Recorder 77: 60-62 (July 1959). (3245)

The arrangement of individual filaments was studied by incorporating a single colored filament in a number of viscose yarns. Photomicrographs, graphs, 6 refs.

STRETCH YARN. C. J. Dudzik (Universal Winding Co.). Textile Inds. 123: 102-105 (Aug. 1959). (3246)

The manufacture, characteristics, and applications of stretch yarns are described. Photo, diagrs, graph.

MODERN HIGH SPEED FALSE TWIST MACHINES FOR THE PROCESSING OF STRETCH YARNS. M. Michelitsch. Melliand Textilber. (English ed.) 40, No. 3: 166-170 (1959). (3247)

The false twist principle and high speed false twist machines are described and illustrated with diagrams.

MILLMAN'S GUIDE TO TEXTURED NYLON YARNS. PART 2. Chemstrand Corp. Modern Textiles Mag. 40: 35-36, 50, 54, 58-61 (Sept. 1959). (3248)

The characteristics and manufacture of the various types of conventional, false-twist, non-torque, and modified types of stretch yarns are described. A table of textured yarn trademarks with manufacturers and equipment used in manufacture is included. Photomicrographs, diagrs.

MECHANICS OF ELASTIC PERFORMANCE OF TEXTILE MATERIALS. PART 14. SOME ASPECTS OF BENDING RIGIDITY OF SINGLES YARNS. M. M. Platt, W. G. Klein, and W. J. Hamburger (Fabric Research Labs.). Textile Research J. 29: 611-627 (Aug. 1959). (3249)

Theoretical analyses are given of the effects of fiber properties and yarn structure on singles yarn bending rigidity, assuming the fibers to be elastically isotropic and to exhibit linear stress-strain behavior. The two extreme cases of complete freedom and no freedom of relative fiber motion are analyzed. The effects on yarn rigidity of fiber dimensions, fiber stiffness, torsional to bending rigidity ratio, yarn density, size, twist, fiber clustering, and prior relaxation treatments are analytically investigated. The rigidity of blended yarns is discussed, and the interaction of gross yarn structure, properties of the fibers being blended, and their spatial distributions qualitatively analyzed. Diagrs, graphs, 12 refs.

EXPERIMENTAL STUDY OF THE GEOMETRICAL STRUCTURE OF SINGLE YARNS. G. Riding (Brit. Rayon Research Assoc.). J. Textile Inst. 50: T425-T442 (July 1959). (3250)

Results of measurements of retraction as a function of twist are given for yarns produced by continuous twisting processes, as opposed to the twisting of a fixed length. These are compared with Tattersall's earlier work and also with the predictions of Treloar's theory. When continuous twisting methods are used, the agreement with theory is very good. The tracer filament technique of Morton and Yen is used to examine the path of a filament in the yarn. Measurements of filament angle by this method yield results in close agreement with theory. Visual evidence of filament migration is also provided. This technique also enables possible variations of twist and packing density across the section of the yarn to be examined. Preliminary results indicate that the twist increases towards the center of the yarn. Photomicrographs, graphs, 5 refs.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

WINDING SPEEDS CAN BE TOO FAST. W. J. Morris (Brit. Rayon Research Assoc.). Skinner's Silk & Rayon Record 33: 690-691 (July 1959). (3251)

The results of a Brit. Rayon Research Assoc. survey on beaming efficiency showed that an increase in winding speed from a low value brought about an increase in beaming efficiency up to an optimum speed, but that the efficiency fell rapidly as the speed was further increased. Photo, diagr.

TRAVERSE-VARIATION DEVICE FOR PINEAPPLE-CONES. Schweiter Ltd. Textile Weekly 59(2): 141 (Aug. 21, 1959). (3252)

A variation of traverse has been designed so that a cheese or cone can be formed with the desired thread pattern at the edges. By varying the traverse, surplus material is transferred from the edge towards the center of the cheese or cone. Photo.

SCHLAFHORST GROOVED CYLINDER CONE WINDER BKN. W. Schlafhorst & Co. Fibres 20: 268 (Aug./Sept. 1959). (3253)

A basic feature of this cone winder is the large diameter grooved cylinder which drives the package by frictional contact and also traverses the yarn. Diagr.

DENSIMETER OR HARDNESS TESTER FOR YARN PACKAGES. Zwick & Co. Melliand Textilber. (English ed.) 40, No. 3: 171 (1959). (3254)

HOLDERS FOR FLAT CONICAL CHEESES. Melliand Textilber. 40, No. 5: 499-500 (1959). In German. Through BCIRA 39: 2713 (1959). (3255)

The spindles (Dratex Apparate GmbH) and their advantages are described.

RUTI DRY SIZING MACHINE. Maschinenfabrik Ruti AG. Textile Merc. 141: 201 (Aug. 14, 1959). (3256)

A melted sizing agent is applied. Diagr.

BRUSHING AND SMOOTHING DEVICE IMPROVES SIZING. J. Prunier. Industrie Textile: 289-290 (Apr. 1959). In French. Through BCIRA 39: 2718 (1959). (3257)

Two devices are described and illustrated. The first comprises two circular brushes for brushing and smoothing the warp so as to ensure complete separation of the threads leaving the sizing machine. The brushes are mounted symmetrically on a vibrating support and the lower brush is cleaned during operation by a cleaning device. The other device is inserted between the size trough and the drying zone of the sizing machine, for preventing contact between the individual threads and for smoothing their surface (rotating brushes).

TWIST-SETTING SPUN CARPET YARNS OF DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Sept. 1959. 5 p. Bull. N-121 (replaces Bull. N-86). Free. (3258)

Twist-setting nylon spun yarns for use in carpets. Includes fiber selection, yarn construction, skeining, relaxation, and drying.

YARN TENSION IN WEAVING PREPARATION AND IN WEAVING. H. Griese. Z. ges. Textil-Ind. 61, No. 9: 351-352 (1959). In German. Through BCIRA 39: 2715 (1959). (3259)

Thread-tension measuring and controlling devices for use in warp and weft winding, beaming and sizing, and for determining the warp and weft tension during weaving are discussed.

HOW GOOD ARE YOUR SLASHERS? W. A. Griffin (Ira L. Griffin & Sons). Textile Bull. 85: 69-72 (Sept. 1959). (3260)

The features and advantages of the new Textile Shops slashers, incorporating the Griffin size applicator, are cited, and their installation in two mills is described. Photos.

STARCH WITH A POSITIVE CHARGE. H. C. Olsen (Nat. Starch & Chem. Corp.). Textile Inds. 123: 104-106 (Sept. 1959). (3261)

Cationic starches have shown promise for sizing wool, Dacron, glass, and other manmade fibers. Due to better weaving efficiency, their somewhat higher cost can often be offset by lower size pickup. Their properties are compared to conventional starch sizes. Photos, graphs.

STARCH ETHERS AND THEIR USES IN THE TEXTILE INDUSTRY. H. Felgentreff. Textil-Praxis (English ed.) No. 2: 64-69 (June 1959). (3262)

The chemical constitution of starch, its etherification on an industrial scale, and uses of starch ethers in sizing, printing, and finishing are discussed.

PROBLEMS OF CREELING. W. Schmidli. Spinner u. Weber 77: 977-982 (Sept. 1959). In German and in English. (3263)

The importance of modern creeling machinery is emphasized and the change creel and double creeling machine are discussed.

Weaving C2

FOUR COLOR WEFT INSERTION FROM CONES. Sulzer Bros. Ltd. Textile Recorder 77: 80-81, 87 (July 1959). (3264)

The construction and operation of the Sulzer 85VS10E loom, with emphasis on the four color pick-at-will mechanism which operates from a magazined cone weft supply, are described. Photos.

AIDS TO EFFICIENCY AT THE LOOM. J. V. Stobbs Ltd. Textile Weekly 59(2): 144, 147 (Aug. 21, 1959). (3265)

The operation of the Stobbs pick regulator, which operates in conjunction with a center weft fork to prevent thick or thin places in fabrics after weft failure, and the spare end motion are described.

AUTOMATIC LOOM BATTERY-FILLING. George Fischer Ltd. Textile Weekly 59(2): 365-368 (Sept. 4, 1959). Textile Merc. 141: 289-291 (Sept. 4, 1959). (3266)

The automatic bobbin-loader ALV is a pirn-changing device with a pirn container which is at least eight times larger than that of the conventional vertical and circular magazines. The weft pirns are transferred from the pirn containers into the shuttle without any battery filling. Preparation of the pirn, formerly done by the battery filler, can now be done by the ALV. Its operation is described. Photos.

ELECTRONIC WEFT DETECTOR. Timothy Eaton Ltd. Textile Merc. 141: 203-204 (Aug. 14, 1959). (3267)

The detector scans the pirn during weaving, and takes suitable action to prevent the weft running out completely by scanning the pirn either when the shuttle is in the box or when the shuttle is in flight at the point where it is just entering or leaving the box. The device consists of a light source and a photoelectric cell.

PRINCIPLES OF TWO-COLOR WEFT INSERTION IN THE SULZER LOOM. R. Leutert. Textil-Rundschau 14, No. 4: 179-183 (1959). In German. Through BCIRA 39: 2722 (1959). (3268)

The mechanism of weft insertion in the 2-weft motion Sulzer machine is described and illustrated.

AUTOMATIC LOADING DEVICE FOR AUTOMATIC LOOMS. Melliand Textilber. 40, No. 5: 515 (1959). In German. Through BCIRA 39: 2723 (1959). (3269)

The weft pirns are automatically brought into the preparatory and change position from large storage containers at the loom. All motions for the preparation of the pirns are regulated pneumatically. Since the charging is released by the hammer movement of the last change, preparation can be effected smoothly.

LOOMFIXER AND HIS JOB. PART 8. W. Westbrook. Textile Bull. 85: 42, 44 (July 1959). (3270)

The setting and maintenance of the letoff motion are described. Photo, diagrs.

LOOMFIXER AND HIS JOB. PART 9. W. Westbrook. Textile Bull. 85: 53-54 (Aug. 1959). (3271)

The setting and maintenance of the loom takeup motion and methods of takeup roll covering and fillet splicing are explained. Photos, diagrs.

LOOMFIXER AND HIS JOB. PART 10. W. Westbrook. Textile Bull. 85: 56-57 (Sept. 1959). (3272)

The installation and alignment of the rotary battery, as well as its auxiliary mechanisms, are discussed. Diagrs.

TIRE CORD PRODUCTION TECHNIQUE. M. Michelitsch (Webstuhlfabrik Günne). Skinner's Silk & Rayon Record 33: 672-673 (July 1959). (3273)

The general procedures and precautions necessary in producing tire cord fabrics are outlined, and the tire cord weaving plant of the Webstuhlfabrik Günne is described in detail, with emphasis on the loom construction. Photo, diagr.

HACKING AND KNOWLES SHUTTLE-BOX CHANGE. G.-G. Lorenz. Spinner u. Weber 77: 1003-1012 (Sept. 1959). In German and in English. (3274)

For the purpose of increasing the possibility of patterning and to avoid the formation of stripes or designs in the cloth, various change devices have been created. The Hacking- and the Knowles-changes are described in detail. Diagrs.

POSITIVE SHEDDING ON RAYON LOOMS. Hattersley & Sons Ltd. Textile Weekly 59(2): 57 (Aug. 14, 1959). (3275)

The positive outside cam treading motion, which follows the general principle of the Woodcroft tappets, has been designed to meet a demand for simple, high speed shedding on silk and rayon looms.

UNUSUAL WARP LETOFF PROBLEM. D. Brunnschweiler and J. Bina (Manchester Coll. Sci. & Technol.). (Letter to the editor). J. Textile Inst. 50: P337-P338 (July 1959). (3276)

The existence of a constant retarding torque on the right-hand beam of two adjacent beams mounted on a common axis for supplying warp to wide looms is noted and the cause for such behavior is questioned.

SRRL WARP TENSION CONTROL DEVICE AND ITS APPLICATION. G. L. Louis and R. L. Longworth (So. Reg. Research Lab.). Textile Bull. 85: 55-56 (Aug. 1959). (3277)

An investigation at the Southern Regional Research Laboratory on the effect of fiber fineness on the dimensional stability of fabrics during weaving and finishing led to the development of a device to provide precision control over fabric width over a range of tensions. A description of the device is given, along with some of the results obtained from its use. Photo, diagr, graph. Full details and engineering drawings of the device are available without charge from the Southern Regional Research Laboratory, P. O. Box 7307, New Orleans 19, La.

HATTERSLEY LOW-BUILT WORSTED LOOM. George Hattersley & Sons Ltd. Textile Weekly 59(2): 142, 147 (Aug. 21, 1959). (3278)

The new low-built worsted loom has been developed from the standard range of pick-at-will and automatic looms and incorporates the Shirley Mark II positive double-lift, open-shed dobby. Photos.

GUSKEN MULTICOLOR AUTOMATIC LOOM. B. Dressel. Melliand Textilber. (English ed.) 40, No. 3: 171-182 (1959). (3279)

Features and operation are described in detail. Photos, diagrs.

RAYON FABRIC DEFECTS DUE TO LOOM TAKEUP MOTION. Textile World 109: 59 (Sept. 1959). (3280)

Fabric defects such as thick and thin places, cracks at start-ups, set marks, and wavy cloth in many rayon and acetate fabrics can be minimized and often eliminated if the intermittent takeup motion of the loom is operating correctly.

SHAKER MOTION FOR LENO WEAVING. Grob & Co. Ltd. Textile Weekly 59(2): 223-224 (Aug. 28, 1959). (3281)

Leno weaving technique which can be employed for leno heddles with eyelet, slot, and double-slot needle makes use of a shaker motion for lifting standard ends at the shed change to allow the leno ends to move from open shed into a cross shed. Shedding particulars are given. Diagr, graph.

KURTZ WARP LETOFF MOTION AND BRAKING DEVICE. A. Meister and M. Ziegler. Melliand Textilber. (English ed.) 40, No. 3: 182-188 (1959). (3282)

The advantages and features of the letoff motion, which is suitable for all types of looms, are described in detail. Photos, diagrs.

SOME NOTES ON SHUTTLELESS LOOMS: AN ENGLISH VIEW. Modern Textiles Mag. 40: 43-44 (Sept. 1959). (3283)

Recent developments in shuttleless looms are briefly noted. Photos.

DEVICES FOR THE BACKWARDS WORKING OF DOBBY AND JACQUARD LOOMS. H. Schieblich. Deut. Textiltech. 9, No. 3: 131-135 (1959). In German. Through BCIRA 39: 2724 (1959). (3284)

Weft-detecting and backwards working motions for dobby and jacquard looms are described.

NEW RIBBON LOOMS. A. K. Kuleva. Tekstil. Prom. 19, No. 1: 41-44 (1959). In Russian. Through BCIRA 39: 2720 (1959). (3285)

DIRECT HEDDLE-LINGOE CONNECTION JACQUARD WEAVING. Textile Weekly 59(2): 449 (Sept. 11, 1959). (3286)

In the latest Grob jacquard heddles the head of the lingoe is slotted, and the lower end loop of the heddle gripped between the two prongs. Advantages are cited. Photo.

WOVEN CARPETS. PART 4. H. Osswald. Melliand Textilber. 40, No. 5: 503-505 (1959). In German. Through BCIRA 39: 2731 (1959). (3287)

The technique of mechanical weaving of carpets with pile wires and the weaves used are described, and an attempt is made to standardize the terminology of the weaves.

STEP-BY-STEP WARP HANGING PROCEDURE. G. Williams. Textile Inds. 123: 91-94 (Sept. 1959). (3288)

The procedure is illustrated by photographs.

BASIC POINTERS ON FILAMENT WEAVING. Textile Inds. 123: 92-97 (Aug. 1959). (3289)

The difficulties arising from mixing spun yarn and filament yarn weaving are discussed, and the special precautions needed for loom maintenance are described. Photos.

INSTRUMENT FOR MEASURING THE SIMULTANEOUS STOPPAGE OF LOOMS. M. Perenyi and A. Antal. Magyar Textiltech. 10, No. 4/5: 179-181 (1958). Through BCIRA 39: 2726 (1959). (3290)

A small motor in the instrument moves a paper tape at 1 mm/sec. Pencil points controlled by electromagnets are located above the tape. The electromagnetic circuits are made and broken by the starting levers of the looms. The duration of stoppages, their frequency, and the coincidence of stoppages can be read off the tape.

Knitting C3

NEW TECHNIQUES FOR FLAT BED, TRICOT, AND CIRCULAR KNITTING WITH METALLIC YARN. L. E. Seidel (Dow Chem. Co.). Textile Inds. 123: 137-138 (Sept. 1959). (3291)

REPORT ON KNITTING DEVELOPMENTS IN EUROPE. J. B. Lancashire. Knitter 23: 19-21, 43 (Sept. 1959). (3292)

DIAMESH CELLULAR UNDERWEAR FABRIC MACHINE. A. Kirkland & Co. Ltd. Hosiery Times 32: 12-13, 15 (Aug. 1959). (3293)

Diamesh, a diamond cellular weft-knitted underwear fabric, is produced on a latch needle circular machine on the pelerine or transferred sinker loop principle. The features and operational principles of the machine are described, and a typical selection of fabric types producible on the machine are noted. Photos.

MODERN TECHNIQUES IN MACHINERY MAINTENANCE. PART 4. LATCH NEEDLE CIRCULAR PIECE-GOODS MACHINES. J. B. Lancashire and W. O'Brien. Hosiery Times 32: 49-50, 72 (Aug. 1959). (3294)

FACTORS AFFECTING HIGHER OUTPUT PER MACHINE IN CIRCULAR KNITTING. Hosiery Trade J. 66: 95-96 (July 1959). (3295)

The factors that influence output per machine in circular knitting are the running efficiency, the linear speed of knitting, and the number of feeders that are working together. This article discusses the advantages and disadvantages of incorporating as many as 240 feeders in a machine having a 30 in. diameter dial.

GEOMETRY AND DIMENSIONAL PROPERTIES OF PLAIN-KNIT FABRICS. D. L. Munden (Hosiery & Allied Trades Research Assoc.). J. Textile Inst. 50: T448-T471 (July 1959). (3296)

The difficulties encountered in attempting to obtain relationships between the dimensions of knitted fabrics, the properties of the constituent yarns, and the variable factors in knitting are discussed. It is suggested that the natural shape of the knitted loop is determined by minimum energy conditions, that the loop tends to this state on relaxation, and that this shape is independent of the properties of the yarn or length of stitch. It is shown that, with these assumptions, the dimensional and weight properties of the knitted fabric in a relaxed state are determined uniquely by the length of yarn in the stitch. The relationships derived geometrically are confirmed experimentally by measurements after dry and wet relaxation on wool and cotton fabrics. Photos, diagrs, graphs, 12 refs.

NEW TECHNOLOGY OF ORLON KNITWEAR. J. W. Bolmeyer (E. I. du Pont de Nemours & Co.). Skinner's Silk & Rayon Record 33: 761-763 (Aug. 1959). (3297)

Three new developments in yarns and knitted fabrics of Orlon, Taslan textured spun yarns, raised and sheared interlock, and the sheath-core principle of spun yarns, are described. Photos, photomicrographs.

WARP KNITTING OF THE FUTURE. K. Mamnicki. Textile Merc. 141: 209-211 (Aug. 14, 1959). Hosiery Times 32: 37-38 (Aug. 1959). (3298)

Future mechanical developments and machine speeds in warp knitting are discussed.

MAINTENANCE CHECKLIST FOR SCP MACHINES. F. Paul. Textile Inds. 123: 135-136 (Sept. 1959). (3299)

A listing of those items which should be examined when the machine is down in preparation for a change of design is given. Photos.

CZECH UNIPLET KNITTING MACHINERY RANGE. Skinner's Silk & Rayon Record 33: 694-695 (July 1959). (3300)

Features of the Uniplet D2Lc automatic double-cylinder circular machine for plain or ribbed hosiery, D2Rc automatic double-cylinder circular machine for all types of hosiery in links-links fabric, Uniplet T60 K circular interlock machine, and Uniplet T60 A2 hand-operated flat machine are described. Photos.

SEVEN-POINT MILL PROGRAM FOR HOSIERY LENGTH CONTROL. L. Koch (Comal Hosiery Mills). Textile World 109: 64-66 (Sept. 1959). (3301)

KNITTING UNPROCESSED NYLON YARNS IN SEAMLESS HOSE. Textile Weekly 59(2): 230, 233 (Aug. 28, 1959). (3302)

The unprocessed yarn is fed continuously through a small metal box containing a heating element, situated just above the knitting head of the machine. Photomicrographs.

METHODS STUDY FOR HOSIERY SEAMER PRODUCTION. M. Gelber (S. J. Capelin Associates). Textile Inds. 123: 145-146 (Aug. 1959). (3303)

A methods analysis for hosiery seaming is outlined.

DEFECTS AND THEIR CAUSES IN KNITWEAR. W. Schneider. Textil-Praxis (English ed.) No. 2: 69-74 (June 1959). (3304)

Defects due to fluctuations in humidity and temperature, improper machine operation, variations in yarns, and defective finishing are described.

ENGLISH-FRENCH-GERMAN GLOSSARY OF STOCKING TERMS. E. Schulze. Hosiery Trade J. 66: 82-88 (July 1959). (3305)

A glossary of terms most commonly used in connection with full-fashioned and seamless hosiery.

Fabrics C4

REEDING AND ITS INFLUENCE ON FABRIC DESIGN. H. Emmrich. Textil-Praxis (English ed.) No. 2: 60-64 (June 1959). (3306)

Diagrs.

EFFECTS OF WEAR AND LAUNDERING ON THE WRINKLING OF FABRICS. P. R. Wilkinson and R. M. Hoffman (E. I. du Pont de Nemours & Co.). Textile Research J. 29: 652-660 (Aug. 1959). (3307)

In a garment, freedom from wrinkling depends upon the ability of the fabric to recover from bending deformations which occur during wear and laundering. During wear, the important variables are the ambient temperature and humidity and the activity of the wearer. Fabrics next to the wearer's body are exposed to temperatures of 90-95° F, to relative humidities of 60-95%, and to pressures up to 2 psi for various times. During laundering, the important conditions are temperatures of 100-140° F while wet, pressure of 1-2 psi, and deformation times of 4-6 min followed by temperature changes which may either set wrinkles in or remove them as in tumble drying. The mechanical agitation during washing does not cause wrinkling; it actually assists the fabric to recover from wear wrinkles. Centrifugal spinning to remove water is the major cause of wrinkling in automatic washing machines. Data and information on the above factors can be used in the design of laboratory tests which can currently predict the performance of wash-wear fabrics. Several new and modified test procedures which are being developed along these lines are described. Photos, diagrs, graphs, tables.

NYLON IN INDUSTRY. Textile Weekly 59(2): 228-229, 233 (Aug. 28, 1959). (3308)

The use of nylon for cement filtration, collapsible cores for hollow concrete beams, and strong waterproof covering is briefly described. Photos.

HIGHLIGHTS OF THE LABELING LAW. J. J. L. Hessen and J. C. Slaughter (Hahn, Hessen, Margolis & Ryan). Textile Inds. 123: 87-91 (Aug. 1959). (3309)

The rules and regulations which the Federal Trade Commission will use in administering the Textile Fiber Products Identification Act are discussed.

RESPONSIBILITY OF THE DESIGNER TODAY. T. Reich. J. Textile Inst. 50: P330-P336 (July 1959). (3310)

The possibility of achieving unusual design variations by the exploration of concepts other than those traditionally used is illustrated by reference to the development of the Fotexur process by which new textures have been successfully reproduced using photographs of such natural objects as straw, bark, etc.

NEW WEAVES FOR SHIRTINGS. F. Krauss. Melliand Textilber. (English ed.) 40, No. 3: 224 (1959). (3311)

CHECKLIST FOR REDUCING SEWING DEFECTS. H. Brownstein. Textile World 109: 56 (Aug. 1959). (3312)

This checklist tells where to inspect goods during sewing, how many to inspect for adequate control, and when to inspect them.

POSSIBILITIES OF BLENDS OF MANMADE WITH NATURAL FIBERS. C. Rossi. Silk Rayon Inds. India 2: 11-22 (July 1959). (3313)

A review.

IRREGULAR PICKSPACING: LOOM FAULT OR YARN FAULT? K. Greenwood. Textile Recorder 77: 66-69 (July 1959). (3314)

Changes in the count of weft yarn are shown to have a measurable effect on pickspacing for an appreciable time after the change has occurred. The causes and effects of this phenomenon are discussed. Photos, graphs, 1 ref.

PREPARATION AND WEAVING OF TREVIRA/WORSTED 55/45. J. Claviez. Spinner u. Weber 77: 982-995 (Sept. 1959). In German and in English. (3315)

Twisting, warping, sizing, weft winding, and weaving of Trevira/worsted 55/45 are discussed. Sources of faults are pointed out.

TUFTED CARPET BACKING UNIT. Plastic Compounds Ltd. Skinner's Silk & Rayon Record 33: 901, 903 (Sept. 1959). (3316)

The features and operation of a giant backing unit which can process 6,000 yards of 120 in. carpet in a 9 hr day are described. Photos.

EFFECTIVENESS OF COUPLING AGENTS IN GLASS-REINFORCED PLASTICS. B. M. Vanderbilt. Modern Plastics 37: 125-132, 198-200 (Sept. 1959). (3317)

Results are reported for laminates prepared with an epoxy resin, a polyester, and a polybutadiene-type resin, in which the vinyl silane coupling agent is (1) omitted, (2) added in resin solution, and (3) applied to the glass surface. The proposal is made that the limiting factor in the strength of glass-reinforced plastics of the polyester and polybutadiene types may be the adhesion of the coupling agent to the glass, rather than coupling with the resin. Tables, 12 refs.

WOMEN'S WASH-AND-WEAR BLOUSES. Consumer Repts. 24: 524-526 (Oct. 1959). (3318)

All-cotton, Dacron/cotton, Ban-Lon, and Taslan wash-and-wear blouses were wear-tested. Only the Dacron/cotton blouses were check-rated.

TIPS FOR MAKING NAPPED AND SHEARED INTERLOCK FABRICS. J. W. Bolmeyer (E. I. du Pont de Nemours & Co.). Textile Inds. 123: 150-151 (Aug. 1959). (3319)

The techniques of yarn selection, knitting, and dyeing and finishing are outlined.

CLOTH TERMS AND PARTICULARS: WOOL: TWILL, SATIN, AND FANCY WEAVES. W. Middlebrook. Textile Mfr. 85: 319-321 (July 1959). (3320)

EFFECT OF PROLONGED STRESS ON GLASS-REINFORCED POLYESTER LAMINATES. J. M. Kuchkuda. Picatinny Arsenal, Dover, N. Y. Nov. 1957. 3 p. PB 151 298. Available from Office of Technical Services, Washington 25, D. C. 50¢. (3321)

Since the glass-polyester laminates did not show stress cracking when immersed in Varsol, it is assumed that they will not stress-crack when used in a stressed condition in an ordinary air atmosphere.

THERMAL COMFORT OF CLOTHING OF VARYING FIBER CONTENT. J. E. Werden, M. K. Fahnestock, and R. L. Galbraith (Univ. of Illinois). Textile Research J. 29: 640-651 (Aug. 1959). (3322)

This paper reports the results of thermal comfort studies on women subjects wearing complete outfits of clothing made from fabrics of cotton, nylon, acetate, and Arnel. The conditions of temperature and humidity were controlled to create environments ranging from slightly cool to hot. Total weight loss, evaporative weight loss, weight gain of clothing, rectal temperature, time of onset of sweating, and skin temperature were the objective measures used. A subjective comfort vote was also taken. By use of these measures, no significant differences were found among the fiber types in relation to thermal comfort of clothing. At 94° F and 80% rh the percentages of gain in clothing weight because of perspiration absorption were related to the original weights of the clothing assemblies rather than the characteristic moisture regain levels of the natural versus the manmade fibers. Environmental temperatures of 88° and 94° F and relative humidity of 80% had decided effects on the comfort vote and total weight losses of the subjects. Evaporative weight loss was affected by relative humidity at all temperatures used in this study. Graphs, tables, 16 refs.

USE OF ORLON FELT IN GLASS REINFORCED POLYESTER LAMINATES. EVALUATION REPORT. U. S. Navy. New York Naval Shipyard, Material Lab, Brooklyn. 1958. 11 p. PB 151 297. Available from Office of Technical Services, Washington 25, D. C. 50¢. (3323)

The effects of employing an Orlon felt material as a surface overlay in a glass reinforced polyester laminate fabricated by a void-free vacuum bag technique were investigated. Compared with a similarly fabricated laminate without Orlon felt, the laminate was found to possess high impact-porosity resistance and abrasion resistance, and low physical property values. Working of the laminate, in the fabrication process, resulted in "washing" or loosening of the Orlon fibers, so that a nonuniform surface was produced.

NOTE ON THE BENDING PROPERTIES OF WOVEN FABRICS. D. N. E. Cooper (Courtaulds Ltd). (Letter to the editor). J. Textile Inst. 50: T472-T473 (July 1959). (3324)

DETERMINATION OF THE TYPE OF DAMAGE IN PAPERMAKER'S FELTS. J. L. Hanchette and R. H. Beaumont (Huyck Felt Co.). Tappi 42: 59-61 (Jan. 1959). (3325)

Burte's method for the detection of chemical modification in wool has been extended to conditions which commonly degrade papermaker's felts. These include solutions of alkali, chlorine, and enzymes. This method, which depends upon the ratio of fiber wet-state properties to dry-state properties, has been found useful for detecting each of these types of felt damage. Graphs, tables, 5 refs.

TUFTED MACHINERY MAINTENANCE. Cobble Bros. Machy. Co. Am. Textile Reptr. 73: 49, 52 (Sept. 17, 1959). (3326)

The steps in the routine tufting machine preventive maintenance program recommended by Cobble Bros. are outlined.

FIBER STRUCTURE OF COARSE DENIER VISCOSE STAPLE FIBERS AND THEIR EFFECT ON WEAR VALUE OF CARPETS. H. Nuding. Textil-Praxis (English ed.) No. 2: 49-53 (June 1959). (3327)

Experiments, carried out on the highly-crimped skin fiber Phrix SKN and the skinless round fiber Phrix STR, showed that the sum of the positive fiber properties required for carpets is greater in the case of highly-crimped skin fibers than in skinless round fibers. These results were confirmed in practice.

FINISHING AND CHEMICAL PROCESSING D

AUTOMATIC CONTROL IN TEXTILE PROCESSING: COTTON, WOOLENS, AND WORSTEDS. F. Blezzard. Drayton Regulator & Instrument Co., Ltd, West Drayton, Middlesex, England. 1958? 71 p. (3328)

Primarily on textile applications of the compressed air relay type of temperature controller. Contents: cotton: bleaching, scouring, and drying; sizing; dyeing; tentering; drying ranges; conditioning; and space heating and air conditioning. Woolens and worsteds: automatic control; washing; loose wool drying; backwashing; combing; hand knitting, hosiery, and carpet wools; tentering. Numerous photos and diagrams.

FINISHING KNITTED FABRIC MADE FROM AGILON D. Brit. Nylon Spinners Ltd. Textile Weekly 59(2): 234, 239 (Aug. 28, 1959). (3329)

Recommended procedures for bulking, scouring, setting, dyeing, and finishing are outlined.

SYNTHETIC FIBER FINISHING PROBLEMS. W. Brennecke. Textil-Praxis (English ed.) No. 2: 85-90 (June 1959). (3330)

The basic characteristics of polyamide, acrylic, polyester, and polyvinyl chloride fibers are described, and some of the problems encountered in their finishing are discussed.

INSTRUMENTATION: AN INTEGRAL PART OF DYEING AND FINISHING. W. H. Ridley (Foxboro Co.). Am. Dyestuff Reptr. 48: 37-40 (July 27, 1959). (3331)

This review of instruments available for dyeing and finishing cites the savings possible by their use in chemicals, steam, water, and power, as well as the improvements in quality and uniformity. Photos, 5 refs.

Chemical processes D1

COATING AND TREATING OF TEXTILES WITH PLASTICS. G. W. Benkendorff. Textile J. Australia 34: 499-507 (June 20, 1959). (3332)

Following a discussion of the theoretical problems due to the macromolecular chemistry of plastics and resins, the various techniques (e.g. knife, roller, and transfer coating, and impregnation) of plastics application are described, and the uses of amino resins in textile finishing are discussed. Diagrs, 24 refs.

ARKOSTAT P ANTISTATIC FINISH FOR SYNTHETICS. Farbwerke Hoechst AG. Textile Merc. 141: 174 (Aug. 7, 1959). (3333)

Arkostat P is washproof and in certain conditions fast to drycleaning solvents. It is a water-soluble precondensate and is applied to the fiber in the presence of a catalyst. It has a storage life of approximately 3 months while the solution including the catalyst has a stability for 6-8 hr. Recommendations for its application are given.

CAUSTIC SODA TO SHRINKPROOF WOOL. A. J. Hall. Textile World 109: 125, 127 (Sept. 1959). (3334)

Recent methods using caustic soda for shrinkproofing wool without serious damage are briefly reviewed. 4 refs.

NEW DEVELOPMENTS IN WET PROCESSING MACHINERY WITH SPECIAL REFERENCE TO MANMADE TEXTILES. P. V. Mehta. Silk Rayon Inds. India 2: 31-34 (July 1959). (3335)

WEIGHTERS FOR CIRCULAR KNITTED YARDGOODS OF ALL TYPES. Knitted Outerwear Times 27: 42-45 (Aug. 31, 1959). (3336)

In table form: name of product, producer, chemical composition, properties, limitations, method of application.

ANTICURL AGENTS FOR TUBULAR KNITTED JERSEY YARDGOODS. Knitted Outerwear Times 27: 38-41 (Aug. 31, 1959). (3337)

In table form: name of product, producer, chemical composition, properties, limitations, method of application.

BLEACHES AND BRIGHTENERS. R. E. Ferris. Soap Chem. Specialties 35: 79-81, 126-127 (Sept. 1959). (3338)

The functions and use of both bleaches and brighteners in home laundering are considered. Photos, graph.

OPTICAL BLEACHES FOR SWEATERS AND KNITTED YARDGOODS OF ALL FIBERS. Knitted Outerwear Times 27: 22-25 (Aug. 31, 1959). (3339)

In table form: name of optical bleach, producer, chemical composition, fiber substantivity, properties, lightfastness limitations, method of application.

HOW DIRECT CHLORINATION CUTS BLEACHING COSTS. H. G. Smolens (Pennsalt Chem. Corp.). Textile Inds. 123: 112-113 (Sept. 1959). (3340)

It has been found that a practical way to reduce the pH of an alkaline cloth or an alkaline solution and at the same time make a precalculated amount of hypochlorite is to use chlorine gas. This discovery is being utilized for pH reduction and control of both neutral and alkaline hypochlorite solutions used in continuous bleaching. It can also be used in hypochlorite desizing and/or hypochlorite caustic saturation and is especially advantageous when there is a problem of satisfactory level maintenance in the saturating machine. Photos.

CONTROL OF RADIATION HEATED GELLING CHANNELS FOR ARTIFICIAL LEATHER MANUFACTURE. G. Boigs. Melliand Textilber. (English ed.) 40, No. 3: 218-222 (1959). (3341)

The requirements of coating equipment for the manufacture of polyvinyl chloride coated fabrics are discussed, and the features of the Menschner control system for gelling temperature are described in detail. Photos, diagr.

CASCADE AND INTENSIVA OPEN WIDTH WASHERS. A. Freyberg. Melliand Textilber. (English ed.) 40, No. 3: 189, 192 (1959). (3342)

Features of the Cascade, developed for soaking, and the Intensiva, developed for rinsing, are briefly noted. Photos, diagrs.

SEERSUCKER EFFECTS IN WOOL FABRICS. D. Sims and J. B. Speakman (Leeds Univ.). (Letter to the editor). J. Textile Inst. 50: T473-T474 (July 1959). (3343)

It is shown that a high permanent luster can be obtained on all-wool fabrics by heat-treatment under pressure, after impregnation with a dilute solution of sodium bisulfite in a mixture of ethylene glycol and water. The principle of the method has since found further application in the production of washable seersucker effects in all-wool fabrics. Photo, 2 refs.

RECENT DEVELOPMENTS IN WOOL TEXTILE FINISHING. C. S. Whewell (Leeds Univ.). Textile Mfr. 85: 344-345 (July 1959). (3344)

New techniques for setting, pleating, scouring, bleaching, shrinkproofing, and modifying the dyeing characteristics of wool are summarized.

USE OF TRICHLOROETHYLENE IN CONTINUOUS SCOURING AND BLEACHING OF TEXTILES. PART 2. APPLICATION OF SOLVENT TREATMENTS TO FIBERS OTHER THAN COTTON. W. A. S. White, H. J. Ross, and N. F. Crowder (Imp. Chem. Inds. Ltd). J. Textile Inst. 50: P320-P329 (July 1959). (3345)

It is shown that the continuous solvent-extraction technique can be applied to spun viscose, linen, wool, jute, and glass fabrics, and that such processes can be carried out in a convenient, safe, and economic manner. 9 refs.

USE OF TRICHLOROETHYLENE IN CONTINUOUS SCOURING AND BLEACHING. W. A. S. White (Imp. Chem. Inds. Ltd). Dyer 122: 31 (Aug. 14, 1959). (3346)

Solvent extraction of cotton and wool with trichloroethylene is briefly examined.

LIFEGUARD FLAME RETARDANT SOLUTION. F. Whowell (Peter Spence & Sons Ltd). Dyer 122: 136-138 (Aug. 28, 1959). (3347)

Lifeguard contains titanyl chloride and antimony trichloride. In use, Lifeguard is padded on to the fabric to be treated, and the oxides of titanium and antimony deposited by neutralization. These mixed oxides confer flame retardant properties to the treated textiles. Its properties and application are described. 4 refs.

PREPARATION AND BLEACHING. PART 5. HOW PREPARATION METHODS DEVELOPED. K. S. Campbell (N. C. State Coll. School of Textiles). Textile World 109: 74-75, 77 (Aug. 1959). (3348)

The development of the continuous scouring-bleaching method, the functions of caustic soda and assistants in the scour, and the factors affecting absorbency and whiteness are discussed. Graphs.

PREPARATION AND BLEACHING. PART 6. THE SCOURING PROCESS. K. S. Campbell (N. C. State Coll. School of Textiles). Textile World 109: 131, 133 (Sept. 1959). (3349)

Procedures for scouring cotton raw stock, yarn, and piece goods are discussed.

CHEMICAL MODIFICATION OF COTTON: AMINIZATION COST STUDY. O. J. McMillan, Jr., K. M. Decossas, G. L. Drake, Jr., J. D. Guthrie, and E. F. Pollard (So. Reg. Research Lab.). Am. Dyestuff Reptr. 48: 37-38 (Aug. 24, 1959). (3350)

Preliminary cost studies for the continuous production of aminized cotton fabric show that it can be produced in large quantities at a relatively low cost. Chemicals used are readily available at low costs, and conventional textile equipment is quite suitable for fabric processing. For a product containing 0.6% nitrogen a cost, exclusive of the cost of the fabric and without profit, as low as 20.4¢ per lb of product has been estimated. Diagr, tables, 12 refs.

REPLACING UREA AND MELAMINE RESINS FOR CREASE AND SHRINK RESISTANT FINISHES. B. C. M. Dorset. Textile Mfr. 85: 337-341 (July 1959). (3351)

The chemical structure and finishing possibilities of acetal resins are described, and the effects of such a finishing treatment on the physical properties of cotton fabrics in comparison with similar finishes obtained with urea formaldehyde and dimethylol ethylene urea resins are summarized with pertinent patent and literature references. Tables.

CREASEPROOFING OF LINEN FABRICS. H. Fritzsch. Deut. Textiltech. 9, No. 3: 150-152 (1959). In German. Through BCIRA 39: 2833 (1959). (3352)

A brief literature review is made on this subject, and some experiments are described, the results of which are summarized in tables.

ROPE MERCERIZING MACHINE. J. Jaeggli. Textil-Rundschau 14, No. 4: 186-188 (1959). In German. Through BCIRA 39: 2814 (1959). (3353)

The main features of the machine described (Jakob Jaeggli & Cie) are: the mercerizing cycle can be altered as desired within 300-600 sec; individual drives are used instead of a central one; 3-fold control means are provided for adjusting tension and shrinkage independently; the squeezing pressure is high (over 6,000 kg) so as to give a degree of mercerization of over 90%; the machine can be fitted with a lye-recovery installation in which the first rinsing water containing a lye of 6-10° Bé is intercepted and evaporated to 30-32° Bé, and the third hot rinsing water can also be reused during the subsequent cycle.

FLAMEPROOFING TREATMENT OF COTTON FABRICS. B. V. Ponomarenko. Tekstil. Prom. 19, No. 1: 69-71 (1959). In Russian. Through BCIRA 39: 2839 (1959). (3354)

The following flameproofing composition is given for cotton fabrics: 16 (parts by weight) of $TiCl_4$, 32 ice, 6.5 Sb_2O_3, 8.0 NaCl, 37.5 water. The method of application is described. In view of a certain toxicity of antimony trioxide, experiments were carried out to replace it by aluminum oxide, using 20 (parts by weight) $TiCl_4$, 40 softened ice, 8.1 hydrate of aluminum oxide, 5.0 common salt, and 26.9 water. Any undissolved titanium complex on the fiber surface, which would present difficulties during sewing of the impregnated fabric, can be removed by washing with soap. Dyeing should be effected after the flameproofing treatment.

USE OF WATER REPELLENT EMULSIONS. W. Krause. Z. ges. Textil-Ind. 61, No. 6: 224-226; No. 8: 309-313; No. 10: 375-380 (1959). In German. Through BCIRA 39: 2840 (1959). (3355)

In this review, the author discusses the activity mechanism of water repellent finishes; their typical characteristics and applicability; directions for their use, dissolution or dilution; pretreatment of the textile material to be impregnated; impregnating methods (padding, exhaustion method, modified padding method); reproofing of rain-protective clothing; drying after impregnation; compatibility of water repellent agents with other finishes and softeners; combined water repellent, anticreasing and swelling-resistant finishing of textiles; impregnation of manmade fiber fabrics; heavy impregnations; stripping of water repellent impregnations, and testing of water repellency (Bundesmann test, spray test, suction test according to Cottbus, determination of water-permeability, test on yarns and loose material). 34 refs.

PERFORMANCE OF SELECTED RESIN-TREATED PERCALES. J. Golden, H. T. Stevens, and H. L. Richey. Am. Dyestuff Reptr. 48: 29-35 (Aug. 24, 1959). (3356)

Percales having 3 finishes (minimum-care, wrinkle-resistant, and Sanforized) were studied under controlled and uncontrolled laundering methods. Skirts made from the fabrics were worn by pre-teenage girls over a period of 20 weeks, which included 10 launderings. Routine laboratory analyses were made of the new fabrics and of fabrics from each of the 69 skirts involved after 1, 3, 5, and 10 launderings. Various types of appearance ratings, including the use of the Cranston scale, the Monsanto photographs, and some original scales, were made at the same intervals. Findings showed differences existing between objective and subjective measurements. The amount of time saved in ironing resin-treated over nonresin-treated percales was highly significant. Graphs, tables, 8 refs.

CYANOETHYLATION OF COTTON. G. Koudela. Spinner u. Weber 77: 1012-1020 (Sept. 1959). In German and in English. (3357)

A review. Graphs, tables, 7 refs.

DEVELOPMENTS IN CREASE-RESIST FINISHING: PROPERTIES AND USES OF AZIRIDINYL AND TRIAZONE RESINS. A. J. Hall. Textile Merc. 141: 118-119, 121 (July 24, 1959). (3358)

COTOPA ACETYLATED COTTON YARNS. Sandoz Products Ltd. Skinner's Silk & Rayon Record 33: 766-767 (Aug. 1959). (3359)

The wet processing and dyeing of Cotopa acetylated yarns are briefly described. Photos.

WATER-REPELLENT AND ROTPROOF FINISH. H. Tramnitz. Spinner u. Weber 77: 1022-1038 (Sept. 1959). In German and in English. (3360)

One bath water-repellent and rotproof finishing is discussed, and test methods are described. Tables, 17 refs.

FINISHING OF COTTON FABRICS WITH HARDENABLE RESINS. H. A. Wannow. Z. ges. Textil-Ind. 61, No. 6: 203-205 (1959). In German. Through BCIRA 39: 2827 (1959). (3361)

The principles of resin finishing with methylol urea, methylol melamine, and methylolethyleneurea are briefly discussed, the method is described, and finishing effects attainable with hardenable resins are reviewed (decorative: embossing, silk finish, and chintz; functional: creaseproofing, no-iron finish, flameproofing, waterproofing, washfast stiffening, etc.).

RESIN FINISHING PROCEDURE FOR COTTON KNITTED YARDGOODS. H. B. Goldstein. Knitted Outerwear Times 27: 7, 9 (Aug. 31, 1959). (3362)

WRINKLE-RESISTANT COTTON WITH DURABLE CHLORINE RESISTANCE. J. G. Frick, Jr., P. J. Murphy, Jr., R. M. Reinhardt, R. L. Arceneaux, and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 48: 37-40 (Sept. 7, 1959). (3363)

Finishing agents for producing wrinkle-resistant and wash-and-wear cotton fabrics have been developed. They consist of mixtures of dimethylol ethyleneurea and a formal of a polyhydroxy compound. These agents give good wrinkle resistance and chlorine resistance, both of which are durable to repeated launderings. Tables, 11 refs.

SOME FACTORS INVOLVED IN WASH-AND-WEAR WOOL. J. F. Krasny, H. E. Harris, G. H. Lourigan, and E. D. White (Harris Research Labs.). Am. Dyestuff Reptr. 48: 31-36 (Sept. 7, 1959). (3364)

The wash-and-wear characteristics of wool fabrics were evaluated on the basis of shrinkage, mussiness, and fuzz formation in laundering. The methods used to determine these factors are described and critically evaluated. It was found that several of a group of randomly selected commercial wool fabrics were, by reason of their construction, reasonably dimensionally stable in machine laundering followed by either air or tumble drying. Those fabrics which showed some shrinkage in air drying shrank considerably more during tumble drying. Some commercial wool fabrics were perfectly smooth after machine laundering and tumble drying, but not after air drying; most wool fabrics studied would have satisfactory ratings using wash-and-wear standards presently used for cellulosic fabrics. In some fabrics, a considerable increase in surface fuzziness was observed after laundering. Chlorination reduced both shrinkage and formation of fuzz in laundering and tumble drying. Photos, graphs, tables, 9 refs.

CHLORINE-RESISTANT BLENDS OF TRIAZONE AND UREA DERIVATIVES FOR WRINKLE-RESISTANT COTTON FABRICS. J. G. Frick, Jr., R. L. Arceneaux, R. M. Reinhardt, and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 48: 29-31, 36 (July 27, 1959). (3365)

Wrinkle-resistant finishes prepared from blended methylol derivatives of ethyltriazone and urea are described. Some of these finishes are not subject to damage from retained chlorine and possess economical and other advantages over the triazone finishing agents used alone. Graph, tables, 6 refs.

WET CREASEPROOFING OF COTTON FABRICS. H. Fritzsch. Deut. Textiltech. 9, No. 4: 210-212 (1959). In German. Through BCIRA 39: 2828 (1959). (3366)

Definitions are given for the terms no-iron and minimum-iron, and properties of resins used in wet creaseproofing are described. Finishing processes are reviewed, and their results discussed. Wear tests and their results give information on the quality-determining characteristics of wet creaseproofing finishes. Reference is made to minimum quality requirements for the finished fabrics and making-up problems (sewing needles and threads, lining material) are discussed.

Dyeing and printing D2

BASIC CHEMISTRY OF DYES AND DYEING. PART 6. W. Postman (Ga. Inst. of Technol.). Textile World 109: 85, 88-89 (Aug. 1959). (3367)

The principal types of vat dyes and their basic methods of application are described.

BASIC CHEMISTRY OF DYES AND DYEING. PART 7. W. Postman (A. French Textile School). Textile World 109: 153-159 (Sept. 1959). (3368)

The final part of this series deals with the chemistry of ingrain dyes, azoic dyes, oxidation bases, pigment colors, solvent soluble dyes, fluorescent brighteners, and developing and reducing colors. A booklet covering all 7 parts is available at $1.00 each for 1-15 copies, 75¢ for 16-30 copies, 60¢ for over 30 copies, from Textile World, 330 W. 42 St., New York 36, N.Y.

X-RAY STUDY OF THE POLYMORPHISM OF SOME ANTHRAQUINONE VAT DYES. J. O. Warwicker (Shirley Inst.). J. Textile Inst. 50: T443-T447 (July 1959). (3369)

An investigation into the polymorphism of 10 anthraquinone vat dyes has been carried out by a comparison of the x-ray powder photographs of different samples of each dye. It is found that polymorphism is a common phenomenon with these dyes. 6 refs.

CONTINUOUS DEVELOPMENT OF DIRECT, DEVELOPED DYEINGS. R. Kern (Sandoz Ltd). Am. Dyestuff Reptr. 48: 36 (Aug. 24, 1959). (3370)

A method for the continuous diazotization of Diazamines is described, and a list of dyes which show equally good washfastness in this continuous process as they do when diazotized and developed by conventional methods is given.

"DYE BALLS" AND "FAMILY COLORS": STORY OF PACKAGED DYES FOR THE HOME. S. M. Edelstein (Dexter Chem. Corp.). Am. Dyestuff Reptr. 48: 32-36 (July 27, 1959). (3371)

REMAZOL DYES. H. U. von der Eltz (Farbwerke Hoechst AG). Textil-Praxis (English ed.) No. 2: 75-78 (June 1959). (3372)

The characteristics of and application methods for Remazol reactive dyes are described.

NEW FINDINGS CONCERNING THE APPLICATION OF REACTIVE DYES. P. Ulrich. Teintex 24, No. 4: 237-243 (1959). In French. Through BCIRA 39: 2768 (1959). (3373)

The monochlorotriazine dyes and dyes of the ether type give cellulosic esters or ethers soluble in cuprammonium solution. In the case of dichlorotriazine dyes, three alternatives are possible, dependent upon the reaction conditions: (1) formation of a monochlorotriazine ester (soluble in cuprammonium) which is still able to react and to form (2) cross-linked cellulosic esters (insoluble in cuprammonium), giving on degradation (3) stable hydroxytriazine esters of cellulose (soluble in cuprammonium). The stability of the dye/fiber bonds depends to a large extent upon the type of substituent, and the type of bond can be determined on the basis of its stability to acid or alkaline hydrolysis. In the case of wool fiber, the chemical bond between the reactive dye and the keratin is not quite clear; there is evidence to suggest that there is a homeopolar bond, probably a -NH- bond. The dyeing mechanism is described.

CONDUCTIVITY MEASUREMENTS AS CONTROL MEANS FOR THE ADDITION OF SULFURIC ACID DURING DYEING WITH INDIGOSOLS. H. Borsten. Tex 18, No. 5: 559-564 (1959). In Dutch. Through BCIRA 39: 2769 (1959). (3374)

Experiments showed that control of sulfuric acid addition to development baths during dyeing with Indigosols can be satisfactorily effected by means of conductivity (resistance) measurements, using a measuring cell with a small cell constant and maintaining the temperature of the liquid as constant as possible. The method is accurate within 1-2%.

WORK STUDY IN A DYEHOUSE. J. N. Paddison (Stevensons (Dyers) Ltd). Textile Mfr. 85: 342-343 (July 1959). (3375)

Work study techniques are essential to the commission dyehouse. The use of such devices as "normal working time" and "process allowance" in setting up bonus systems is explained.

STUDIES ON THE DYEING PROPERTIES OF VISCOSE FIBERS. PART 3. SOME SUGGESTIONS RESPECTING THE EFFECTS OF SPINNING CONDITIONS ON DYEING PROPERTIES. A. Nakai. J. Soc. Textile Cellulose Inds. Japan 15, No. 5: 422-425 (1959). In Japanese (English summary). Through BCIRA 39: 2787 (1959). (3376)

Increasing the age of the viscose, the sulfuric acid concentration, and the sodium sulfate concentration lowers the dyeability; the surface color becomes light and bright owing to the poor tendency to ring dyeing.

ALCIAN DYES IN DYEING AND PRINTING. A. S. Stepanov, A. G. Barinova, and T. D. Balashova. Tekstil. Prom. 19, No. 3: 31-37 (1959). In Russian. Through BCIRA 39: 2767 (1959). (3377)

The development and properties of Alcian dyes are reviewed. The application of the dyes according to directions simplifies the technological process and makes it possible to omit some of the additional operations. The dyes can be used for dyeing heavy fabrics within the shortest possible time. Mature and immature cotton fibers are dyed uniformly; this is of particular importance in dyeing fabrics from low quality cottons. The dyeings on cotton and spun rayon fabrics are bright, pure and fast; their wetfastness is especially high. The lightfastness is somewhat lower than that of vat dyeings.

DEVELOPMENT OF YARN DYEING PROCEDURES FOR NYLON AND ORLON. G. E. Woodside (Du Pont of Canada Ltd). Can. Textile J. 76: 43-50 (Sept. 4, 1959). (3378)

Following a description of the development of package dyeing techniques for nylon and Orlon, questions on dyeing and finishing problems encountered in practice are answered.

DEMETALIZATION, LEVELING, AND RECHROMING OF CHROME-DYED WOOL PIECES. H. E. Millson (Am. Cyanamid Co.). Am. Dyestuff Reptr. 48: 47-58 (Sept. 7, 1959). (3379)

A new method of demetalizing and leveling chrome-dyed pieces is discussed. By the use of Cyquest 40 sequestering agent with certain acids, salts of many metals (including the "tramp" metals) may be removed even after the dye-metal-wool complex has been formed. This new process of demetalization and redyeing has been used practically, and to date, several hundred pieces of fine woolen and worsted fabrics have been leveled by this method and passed as firsts at the perch. The effect of the demetalization method on dyeings made by the top-chrome, meta-chrome, and bottom-chrome processes is discussed. A recommended list of the dyes that give excellent results is included. Photos, graphs, tables, 5 refs.

DYEING OF WOOL AT SUBBOILING TEMPERATURES. C. H. A. Schmitt (Sandoz Inc.). Am. Dyestuff Reptr. 48: 40-41 (Sept. 7, 1959). (3380)

The shades obtained, lightfastness, and washfastness of Brilliant Alizarine milling and Lanasyn neutral premetalized dyes on worsted piece goods at 165° F, 175° F, and 185° F are compared. In most cases, dyeings made at either of the 3 lower temperatures gave brighter shades. The maximum fastness to light and washing is obtained from a larger number of colors at 185° F than when dyeing at the lower temperatures. Good fastness is obtained with only slightly less color yield than at the boil. Table.

DYEING OF ACRILAN AND ITS BLENDS. W. Stump (Chemstrand Corp.). Can. Textile J. 76: 43-46 (Aug. 7, 1959). (3381)

Methods for dyeing Acrilan for use in carpets, blankets, jersey, and sweaters, and for dyeing Acrilan in blends with rayon, wool, Acrilan 16, silk jersey, and cotton are briefly reviewed.

DYEING EXPERIMENTS WITH NAPHTHANILIDE DYES ON ZEFRAN POLYACRYLONITRILE FIBERS. H. Herzog and J. Koszticza. SVF Fachorgan Textilveredlung 14, No. 4: 195-204 (1959). In German. Through BCIRA 39: 2799 (1959). (3382)

In contrast to all other known polyacrylonitrile fibers, Zefran can be easily dyed with naphthanilide dyes. Even so called weakly substantive naphthanilides are well absorbed and their fastness is very good. They are easily coupled with diazo fast salts in a second bath by heating toward the end of the developing period for a short time from room temperature to 55-60° C. Piece goods can also be grounded on the padder and subsequently subjected to intermediate drying. Deep and bright shades with good to very good fastnesses can be produced with naphthanilide dyes both on yarn and fabrics, but the fiber, at least in its present form, shows yellowing (dyeings become dull) on washing at 95° C with 3 g/l soap for 20 min.

STUDY ON THE DYEING OF CELLULOSE ACETATE. PART 5. COLOR OF THE DISPERSE DYES DYEING. PART 6. RELATION BETWEEN THE DYE CONCENTRATION AND ITS LUMINOSITY ON THE FIBER. K. Odajima. J. Soc. Textile Cellulose Inds. Japan 15, No. 5: 301-307 (1959). In Japanese (English summary). Through BCIRA 39: 2788 (1959). (3383)

Part 5. The change of hue with dyeing concentration and the relation between luminosity and purity were studied. Most dyes give maximum purity at 1-2% dyeing concentration and the rate of decrease in luminosity falls with increased concentration. Part 6. A formula, $Rd = pc^k$, relating dye concentration (c) with the luminosity of the dyed fabric (Rd), where p and k are constants named the standard luminosity and the luminosity gradient in dyeing, is derived.

STUDY ON THE DYEING OF CELLULOSE ACETATE. PART 7. COLOR AND THE TEMPERATURE IN DYEING. K. Odajima. J. Soc. Textile Cellulose Inds. Japan 15, No. 5: 426-429 (1959). In Japanese (English summary). Through BCIRA 39: 2789 (1959). (3384)

More brilliant colors are generally obtained at low temperature (higher dye concentration at the surface of the fiber). The exceptional behavior of Duranol Brilliant Blue G is discussed.

DYEING BARRE-FREE COLORS ON NYLON STRETCH TIGHTS. Sandoz Inc. Knitter 23: 24-25 (Sept. 1959). (3385)

DYEING KNITWEAR OF DARVAN TYPE X-7 NYTRIL FIBER. H. G. Sommar (B. F. Goodrich Chem. Co.). Knitted Outerwear Times 27: 11, 29-37 (Aug. 31, 1959). (3386)

DYEING CIRCULAR KNITTED FABRIC OF ORLON-WOOL BLEND. L. Bidgood, Jr. (E. I. du Pont de Nemours & Co.). Knitted Outerwear Times 27: 9, 11, 49 (Aug. 31, 1959). (3387)

NOTES ON DYEING COTTON WASTE AND RAGS. A. Ellis. Textile Recorder 77: 78 (July 1959). (3388)

Factors of practical importance in the dyeing of waste and rags are discussed.

DEVELOPMENTS IN DYEING ACRYLIC FIBERS. F. Schouteden. Teintex 24, No. 4: 262-267 (1959). In French. Through BCIRA 39: 2796 (1959). (3389)

Similar procedures that have been developed almost simultaneously and completely independently are reviewed (with reference to patents by Du Pont, Cassella, Pacific Mills, Gevaert, Francolor). They consist in treating acrylic fibers with hydroxylamine at temperatures from 70-130° C with a view to improving the dye affinity of the fibers (the Gervaert patents mention the possibility of carrying out the treatment at temperatures above 100° C simultaneously with the dyeing process). The reaction of hydroxylamine with nitrile-group-containing polymers in aqueous medium leads to the formation of acid hydroxamic groups, with temporary presence of amidoximic groups. Contrary to expectations, the improved dye affinity of the fibers is due to the presence of acid hydroxamic groups and not to amino groups.

DYEING AND FINISHING TERYLENE IN CANADA: GENERAL PROGRESS REPORT. A. Straw (Can. Inds. Ltd). Can. Textile J. 76: 47-50 (Aug. 7, 1959). (3390)

Brief survey of developments in dyeing Terylene staple and filament fabrics.

NEW DYEING METHODS FOR MANMADE FIBERS. D. P. Milburn and R. Narayan. Silk Rayon Inds. India 2: 23-28 (July 1959). (3391)

A review. 26 refs.

HIGH TEMPERATURE DYEING POTENTIAL. H. Eberhard (Scholl AG). Am. Textile Reptr. 73: 55-57 (Sept. 17, 1959). (3392)

The advantages of high temperature dyeing are considered and future dyeing methods are pictured as almost exclusively high temperature. Developments in new machinery are also briefly discussed.

PACKAGE DYEING SYNTHETIC SEWING THREAD. Heminway & Bartlett Mfg. Co. Textile Inds. 123: 106-110 (Aug. 1959). (3393)

Dyeing and finishing procedures for nylon, polyester, and acrylic threads are described. A table listing the comparative physical and chemical properties of the most important fibers used in sewing threads is included. Photos, diagrs, table.

VAT DYEING LINEN AND HEMP CROSS-WOUND BOBBINS. E. Wilhelm (Badische Anilin & Soda Fabrik AG). Textil-Praxis (English ed.) No. 2: 79-83 (June 1959). (3394)

In order to achieve uniform dyeing of yarn crossover points, as well as dye penetration to the bobbin core, the use of a modified Frauchiger spindle centrifuge is recommended. Photos.

CREASING PROBLEMS IN WET FINISHING. J. P. Millburn. Textile Inds. 123: 95-97 (Sept. 1959). (3395)

The effects of creasing during wet processing on streakiness in dyeing are noted, and the causes of creasing and their analysis and elimination are discussed.

SWEATER DYEING OF ORLON ACRYLIC FIBER. A. P. Zinnato (Du Pont of Canada Ltd). Can. Textile J. 76: 51-53 (Sept. 4, 1959). (3396)

The dyeing of Orlon sweaters in paddle machines with disperse and cationic dyes is reviewed.

CONTINUOUS DYEING OF THICK FABRIC UNDER VACUUM. A. D. Malikov. Tekstil. Prom. 19, No. 1: 52-55 (1959). In Russian. Through BCIRA 39: 2774 (1959). (3397)

The use of vacuum dyeing is shown to limit the temperature of the dyebath to 85-90° C. The first machine in which the experiments were carried out by dyeing fabrics with direct and sulfur dyes was operating at a temperature range of 70-75° C, at which good results were obtained by sucking through the dye for 3 min and subsequently steaming the fabric for 30 sec. There is evidence to suggest that treatment of the fabric in vacuo would make it possible to omit further steaming, since it increases the intensity and fastness of the dyeings.

PRACTICAL EXPERIENCE WITH THE PAD-ROLL DYEING MACHINE. F. J. Percarpio, R. M. Lesh, and J. S. Thackrah. Am. Dyestuff Reptr. 48: 41-43 (July 27, 1959). (3398)

Details of the operation and results obtained over a two year period with the pad-roll dyeing system at Northern Dyeing Corp. are presented. 2 refs.

IMPROVED JIG CONSTRUCTION. R. Siegfried. Textil-Praxis (English ed.) No. 2: 83-84 (June 1959). (3399)

The mechanism is described and constructional details are given of a new closed automatic jig (R. von Wening Maschinenbau).

DEVELOPMENTS IN DYEING AND OPEN-WIDTH WASHING MACHINES. Maschinenfabrik Benninger AG. Textil-Rundschau 14: 188-190 (1959). In German. Through BCIRA 39: 2772 (1959). (3400)

Two new constructions are described: the automatic high temperature Benninger dye jig LFMkd and the Benninger open-width washing machine fitted with the Turbinator.

PHYSICAL ELEMENTS IN MACHINE DYEING. L. Drijvers. Teintex 24, No. 5: 335-347 (1959). In French. Through BCIRA 39: 2773 (1959). (3401)

Physical factors that contribute to the levelness of dyeings: the dynamic pressure of the pump producing the flow; the temperature and, in relation to it, the static pressure; the speed at which certain factors are changed (temperature, salt concentration, etc.), and the affinity of the dye for the material to be dyed, are discussed, with special reference to two dyeing installations based on the Steverlynck high temperature dyeing principle. They make it possible to produce at any time and at any temperature an adequate flow, to increase or decrease gradually the temperature and to add the dye slowly and progressively.

ELEMENTS OF COLOR COMBINATION IN TEXTILE PRINTING. W. Meitner. Dyer 122: 61, 63 (Aug. 14, 1959). (3402)

STUDIES IN THE ADSORPTION OF ARYLAMIDES OF 2-HYDROXY-3-NAPHTHOIC ACID AND RELATED COMPOUNDS BY CELLULOSIC FIBERS. E. H. Daruwalla and R. H. Mehra (Univ. of Bombay). Textile Research J. 29: 595-610 (Aug. 1959). (3403)

Adsorption of arylamides of 2-hydroxy-3-naphthoic acid and related compounds (azoic coupling components) by a variety of cellulosic fibers under different conditions of application such as varying alkali concentration and sodium chloride concentration of the impregnating liquor, temperature, etc., was studied. Graphs, tables, 34 refs.

BREAKTHROUGH IN PIGMENT TECHNOLOGY: NEW YELLOW-GREEN PHTHALOCYANINE. E. A. Wich (Gen. Aniline & Film Corp.). Am. Dyestuff Reptr. 48: 42-43 (Sept. 7, 1959). (3404)

A new phthalocyanine pigment has been introduced which extends the color spectrum of the phthalocyanines to yellow-green shades. The properties of the new pigment are very similar to those of phthalocyanine green. It is lightfast, chemical resistant, and heat stable. It may be used for textile printing and padding of all types of fabrics. There is almost no limit to the systems with which it can be used, or to the aftertreatment which may be employed. A water dispersion of very fine particles is available for use in spin dyeing. Water-dispersible paste and presscake are also available for preparing concentrates and textile printing and padding formulations. Graphs, table.

PRACTICAL EXPERIENCES DURING DIRECT PRINTING WITH PIGMENT DYES. H.-W. Jung. Melliand Textilber. 40, No. 5: 536-539 (1959). In German. Through BCIRA 39: 2809 (1959). (3405)

Methods for the washproof application of pigment dyes on textile fibers by means of resin dispersions (particularly oil-in-water emulsions) are briefly reviewed, with special reference to the Acramin-F, Helizarin, Oremasin, and Imperon processes. Points to be observed in the preparation of the printing paste, direct printing, and fixation of the pigments are discussed.

NEW EQUIPMENT FOR THE PRODUCTION OF SCREEN PRINTING STENCILS. E. Kälin. Melliand Textilber. 40, No. 5: 546-548 (1959). In German. Through BCIRA 39: 2806 (1959). (3406)

A copying machine with optical adjustment, a lacquer removing machine with rotatable suction nozzle, and a gauze-stretching device, in which the clips are directly pressed on to the screen frame by pneumatic means, are described.

LEVEL DYEING OF STREAKY POLYAMIDE ARTICLES. H. Egli. SVF Fachorgan Textilveredlung 14, No. 4: 179-185 (1959). In German. Through BCIRA 39: 2792 (1959). (3407)

Chemical and physical causes of streaky dyeings on polyamide fabrics are discussed, and methods for dyeing with disperse dyes and anionic dyes ((1) padding method; (2) combination of 1:2-metal-complex dyes and disperse dyes; (3) use of dye assistants, e.g. swelling agents, cationic and anionic assistants; (4) high-temperature dyeing) are reviewed. All the assistants and dyeing methods described are only successful when specially suitable dyes are selected.

HOW TO CHOOSE A PIGMENT-PRINTING SYSTEM. M. Mackay. Textile World 109: 71 (Aug. 1959). (3408)

Pigment-printing systems can be divided roughly into two types: water-in-oil and oil-in-water. By taking advantage of the good points of both common pigment-printing systems, a better job can be done than by either one alone. Pointers on choosing between them for special applications are noted.

THICKENING AGENTS IN MODERN TEXTILE PRINTING. W. Jülicher. Melliand Textilber. (English ed.) 40, No. 3: 202-208 (1959). (3409)

The comparative properties and applicability of kernel flour ethers, alginates, starch ethers, crystal gum, and starch are discussed.

PRINTING WITH EMULSIONS. R. W. Jacoby. Modern Textiles Mag. 40: 47, 83 (Sept. 1959). (3410)

The advantages and disadvantages of emulsion printing pastes are briefly noted.

TRANSFER OF DISPERSE AND ACID DYES TO CELLULOSE ACETATE AND POLYAMIDE FIBERS DURING STEAMING. E. H. Daruwala. Silk Rayon Inds. India 2: 29-30 (July 1959). (3411)

7 refs.

ROLLER PRINTING OF CIRCULAR KNIT CLOTH. C. Reichman. Knitted Outerwear Times 27: 3, 5 (Aug. 31, 1959). (3412)

REMAZOL DYES IN TEXTILE PRINTING. H. Zimmermann. Melliand Textilber. 40, No. 5: 539-544 (1959). In German. Through BCIRA 39: 2810 (1959). (3413)

The application technique in direct printing, alone or in combination with other dye classes (Naphthol AS, vat dyes, other reactive dyes), to cellulosic fibers, silk and wool is described, and directions are given for the production of pad dyeings, white and colored resists on Remazol dyeings, white preprinted resists, and resists with Remazol dyes under Aniline Black. The general properties of Remazol prints and their applicability are also discussed.

BLEACHING OF DYESTUFFS BY FLUORESCENT LIGHT. H. Zukriegel. Melliand Textilber. (English ed.) 40, No. 3: 192, 194 (1959). (3414)

Studies and practical experiments with the Heliotest Sunlight Fastness Tester on dyestuffs have shown that there are connections between the technical standard values for the lightfastness of dyestuffs and their extinction curves. Graphs, 11 refs.

Mechanical processes D3

PAREX TWO-UNIT SURFACE COMBUSTION SINGEING MACHINE. Textile J. Australia 34: 432-433 (June 20, 1959). (3415)

The features and operation of the machine are briefly described. Diagrs.

SHIRLEY RAISING ACTION INDICATOR. Tomlinson (Rochdale) Ltd. Textile Merc. 141: 257-258 (Aug. 28, 1959). (3416)

Two typical card rollers, one pile and one counter pile, are fitted with dynamometers in which the drive is transmitted from the driving pulley to the roller shaft through a strong spring. The small deflection of each spring is accurately measured electrically and displayed on a meter. Photos.

RASMA NAPPING ROLLER GRINDING MACHINE. M. Siegesmund. Textil-Praxis (English ed.) No. 2: 91-95 (June 1959). (3417)

A description is given of the construction and mechanism of the machine, which grinds a napping machine with 30 rollers and about 2,000 mm grinding width in only 90 min. It can be fitted on almost all types of napping machines.

AUTOMATIC CONTROL OF WEFT STRAIGHTENERS. H. Mahlo. Melliand Textilber. (English ed.) 40, No. 3: 208-216 (1959). (3418)

Following a discussion of the various types of weft straighteners commercially available, the Orthomat photoelectric weft thread control system (Heinz Mahlo) is described in detail. Photos, diagrs.

Drying, setting, conditioning D4

PIECE GOODS DRYING: REVIEW OF RECENT DEVELOPMENTS. K. S. Laurie (John Dalglish & Sons Ltd). Textile Merc. 141: 57-60 (July 10, 1959). (3419)

The mechanics and economics of drying by mechanical methods and by hot air, and their application to tenter type machines, are discussed.

NEW METHOD OF FELT DRYING. R. M. Trakhtenberg, G. I. Kondrin, and B. L. Smushovich. Tekstil. Prom. 19, No. 3: 28-30 (1959). In Russian. Through BCIRA 39: 2845 (1959). (3420)

Heating of the felt sheet (by steam or electric current) to 70-80° C makes it possible to increase the removal of water by 15-20%; this can also be achieved by reducing the velocity of felt passage through the calender rollers. Preheating of the felt accelerates drying and saves steam and power. Squeezing of the felt can be improved even on existing installations.

TESTING AND MEASUREMENT E

TEXTILE CALCULATIONS MADE EASIER. U. Schirdewan. Skinner's Silk & Rayon Record 33: 676-677 (July 1959). (3421)

The use of the A. W. Faber-Castell special slide rule, which has particular scales, marks, and cursor lines, storing constants which are needed repeatedly, and mathematical functions relating to textiles specifically, is illustrated by means of six examples.

CONDITIONING OF SMALL SAMPLES BY MEANS OF OVEN, INFRARED, AND HIGH FREQUENCY DRYING. W. Wegener and H. Grunwald. Z. ges. Textil-Ind. 61, No. 9: 342-347; No. 10: 371-375 (1959). In German. Through BCIRA 39: 2885 (1959). (3422)

The time-dependent humidity and temperature curve is studied on 10-g samples of various fibers and materials from different processing stages by using a hot-air drying oven with built-in balance (Brabender), an infrared conditioning balance (Sauter), and a high-frequency drying oven without balance (Masing & Co.). The final moisture-content values and the drying times required are compared with each other as well as with the standardized oven-drying values. At optimum setting of the apparatus, the infrared conditioning method permits most intense and fastest drying. The longest time is required for oven-drying, but it gives final moisture-content values that are not always attainable by the faster high-frequency method.

Fibers E1

RAW COTTON FIBER PROPERTIES; SCIENTIFIC ASSESSMENT. E. Lord (Brit. Cotton Ind. Research Assoc.). Textile Weekly 59(2): 213-218 (Aug. 28, 1959); 361-364 (Sept. 4, 1959); 451-453, 457 (Sept. 11, 1959). (3423)

Part 1. Methods for determining fiber length and maturity are discussed. Part 2. Methods for measuring maturity, fineness, and neppiness. Part 3. Combined fineness/maturity tests and strength tests.

PROCION DYE STAINING FOR DIFFERENTIATION OF SKIN AND CORE OF VISCOSE RAYON FIBERS. K. Kato (Toyo Rayon Co. Ltd). Textile Research J. 29: 661-664 (Aug. 1959). (3424)

A new microscopical technique for differentiating the skin-core structure of viscose rayon fibers is described. Slide preparations mounting fiber cross sections are stained with an alkaline solution of Procion Black HGS. This technique is found to furnish a staining entirely selective for the skin area in a simple and rapid way. Typical results are presented for several types of cellulose rayons showing various staining behaviors. It is seen that these results are in good agreement with those obtained by other stain methods. The same procedure, when applied to a variety of fibers other than cellulosics, is found to give positive staining reactions only to wool, silk, regenerated protein, and Vinylon fibers. Although most of these findings are as yet not satisfactorily explained, reactive dye staining of this kind seems to be of much promise in the field of fiber microscopy. Photomicrographs, 19 refs.

APPARATUS FOR THE CAUSTICAIRE METHOD OF MEASURING COTTON-FIBER MATURITY AND FINENESS. G. E. Gaus and S. T. Burley, Jr. U. S. Agri. Mktg. Serv., Washington 25, D. C. 1959. 20 p. AMS-329. (3425)

A new apparatus, the automatic Causticaire machine and dryer, meets the essential requirements for a practical system of treating and drying cotton samples. It includes a machine for treating the samples with caustic soda solution followed by water rinsing and damp-drying, and a mechanical dryer for reducing the moisture content of the processed samples. Diagrs, photos, 4 refs.

METHODS OF TESTING TEXTILES: METHOD 48: DIAMETER OF WOOL FIBERS. Can. Textile J. 76: 60-62 (Sept. 18, 1959). (3426)

This method may be used to determine the average fiber diameter and the diameter distribution of wool fibers at all stages of processing from raw wool to finished fabric. Tables are given for relating the fiber diameter measurements to the grade of the wool.

TEST FOR COTTON FIBER MATURITY (ESTIMATION BY CLASSIFICATION OF FIBERS SWOLLEN IN SODIUM HYDROXIDE SOLUTION). British Standards Institution, London. 1959. 8 p. B.S. 3085:1959. Available from Am. Standards Assoc., 70 E. 45 St., New York 17, N.Y. 55¢. (3427)

Yarns E2

TENSION ANALYSIS: A NEW TOOL TO SOLVE MANY TEXTILE PROBLEMS. B. Bailey. Textile World 109: 46-48 (Aug. 1959). (3428)

Many tension problems are being solved by electronic tension analyzers that measure and record tension variations in textile materials. The application of these instruments to quality control in spinning, winding, throwing, warping, slashing, weaving, and knitting are described. Photo, diagrs, graph.

YARN QUALITY. K. Stütler. Textil-Praxis (English ed.) No. 2: 54-58 (June 1959). (3429)

The statistical evaluation of such yarn characteristics as tensile strength, elongation, and uniformity for prediction of yarn quality is discussed. Graphs, tables.

INSTRUMENT FOR MEASURING ROVING STRENGTH. C. B. Landstreet, J. Simpson, and H. Hutchens. Textile Bull. 85: 45-48 (July 1959). (3430)

The principles and operation of a modified Hertel tester, designed for use with twisted rovings, are described. Photo, diagrs, graphs, tables, 3 refs.

STUDY OF BLENDED WOOLEN STRUCTURES. PART 5. METHODS OF WITHIN-SECTION BLEND ANALYSIS. M. J. Coplan and W. G. Klein (Fabric Research Labs.). Textile Research J. 29: 632-639 (Aug. 1959). (3431)

Statistical implications of the index of blend irregularity have been elaborated, with consequent improved utility of this measure. A more complete characterization of within-section blend distribution is now possible by two new techniques developed. Some new light is shed on the characteristics of fiber clustering and blend irregularity within the sections of woolen wool-nylon yarn. Diagr, graphs, tables, 10 refs.

Fabrics E3

METHOD FOR DETERMINING THE FLUIDITY OF LINEN MATERIALS IN CUPRAMMONIUM HYDROXIDE SOLUTION. British Standards Institution, London. 1959. 11 p. B.S. 3090:1959. Available from Am. Standards Assoc., 70 E. 45 St., New York 17, N.Y. 55¢. (3432)

APPLICATION OF A SEQUENTIAL TYPE ANALYSIS TO FIELD TESTS. H. R. Rush (QM R&E Field Evaluation Agency, Fort Lee, Va.). Textile Research J. 29: 628-631 (Aug. 1959). (3433)

A unique situation is encountered in determining the durability of fabrics under field test situations; i.e., the data can be analyzed at any point in time in the test. This suggests that the sensitivity of the test can be determined at any point by utilizing the well-known concept of the power of the analysis of variance test. With this information, a decision can be made to stop or continue the test as in the usual sequential procedures. The results of the application of this method to an actual test is presented. Graph, table, 16 refs.

METHODS OF TESTING TEXTILES: MEASUREMENT OF THE BREAKING STRENGTH AND ELONGATION OF FABRICS: METHODS 9.1 AND 9.2. Can. Government Specifications Board. Can. Textile J. 76: 55-59 (Sept. 18, 1959). (3434)

The details of the strip and grab methods for testing breaking load and elongation, based on the constant-time-to-break principle, are given.

STANDARD PROCEDURE OF QUALITY EVALUATION FOR WOVEN TEXTILES WITH A MANUAL OF DEFECTS AND IMPERFECTIONS. Nat. Assoc. of Shirt, Pajama & Sportswear Mfrs. and Textile Div. of the Am. Soc. for Quality Control. 1959. 4 p. Available from W. S. McMann, Secretary, Textile Div. ASQC, Quality Control Dept., Dan River Mills, Inc., Danville, Va. (3435)

This work is offered as a rule and guide between vendor and vendee to define defects in woven textiles and to establish penalty point values for them. It does not attempt to establish what are or are not acceptable deliveries, but it does provide a formula whereby vendor and vendee can agree upon the quality level of the purchase, within which delivery must be made.

CONTROLLING CLOTH QUALITY WITH THE POINT GRADING SYSTEM. W. Sproule. Textile Bull. 85: 35-37 (July 1959). (3436)

The major-minor total point grading system is used to illustrate how a fabric grading system works. Details of the system and the type of reports used are described. Photos, diagrs.

MILL MANAGEMENT F

PURCHASING PRACTICES. Textile Bull. 85: 29-35 (Aug. 1959). (3437)

Replies to a questionnaire on purchasing practices submitted to 60 textile manufacturing organizations are summarized.

Industrial engineering F1

MULTI-MACHINE ASSIGNMENTS. PART 2. DETERMINING CYCLE TIMES AND RATIOS. T. F. O'Connor. Modern Textiles Mag. 40: 65-66 (Aug. 1959). (3438)

ANALYTICAL TRAINING METHOD FOR WEAVERS. Textile World 109: 43-44 (Aug. 1959). (3439)

How the analytical method is being used by two companies in seven mills is described.

QUALITY AUDIT IN SPINNING MILLS: AN OUTLINE OF SOME OF THE FINDINGS. R. G. Newbery. J. Textile Inst. 50: P308-P319 (July 1959). (3440)

The purpose and procedures used in the quality audits undertaken by the Cotton Board Productivity Center are briefly explained, and the common areas of weakness found are discussed under the headings of cleanliness, technical conditions, operative methods, and quality tests.

COLLABORATING IN QUALITY CONTROL. P. F. Taylor (Marks & Spencer Ltd). Dyer 122: 131-133 (Aug. 28, 1959). (3441)

This paper briefly discusses the ways in which the retailer may work with the textile industry to create improved standards of value and to satisfy the needs of the public.

WHERE TO CHECK QUALITY. J. Wheeler (Canton Cotton Mills). Textile Bull. 85: 41-43 (Aug. 1959). (3442)

Based on years of actual mill experience, this article tells what a quality control program is supposed to do, how it is supposed to do it, and where quality control should be done.

OPERATIONS RESEARCH: METHODS AND PROBLEMS. M. Sasieni, A. Yaspan, and L. Friedman. John Wiley & Sons, Inc., N. Y. 1959. 316 p. $10.50. (3443)

Contents: Introduction; probability; sampling; inventory; replacement; waiting lines; competitive strategies; allocation; sequencing; dynamic programming. References.

ACTIVITY ANALYSIS IN ONE LESSON. W. J. Baumol (Princeton Univ.). Am. Economic Rev. 48: 837-873 (Dec. 1958). (3444)

A simplified presentation of three areas of operations research and economics: mathematical programming, input-output analysis, and activity analysis. Graphs, 14 refs.

MANAGEMENT ACCOUNTING BY COMPUTER. F. C. de Paula and J. A. Goldsmith. Textile Weekly 59(2): 135-138 (Aug. 21, 1959). (3445)

The results of an experiment to determine what would be the economics, advantages, and disadvantages of using a computer to produce management accounting information are reported.

MORE INFORMATION FROM INVENTORY REPORTS. F. H. Drewes (Palmetto Yarn Mills). Textile Inds. 123: 118-120 (Sept. 1959). (3446)

The preparation of additional reports and charts from typical weekly inventory reports, in order to permit better interpretation of inventory values, is described and illustrated.

Plant and equipment F2

DESIGN FOR TEXTILE PLANT. H. M. Rogers (Lockwood Greene Engineers). Am. Textile Reptr. 73: 9-10 (Sept. 3, 1959). (3447)

The design features which should be incorporated in the modern textile mill are outlined.

MODERN PAINTING TRENDS. A. R. Cannon. Textile World 109: 54-55 (Sept. 1959). (3448)

TEXTILE MILL MAINTENANCE. PART 1. F. H. Slade. Textile Mfr. 85: 307-311 (July 1959). (3449)

The basic concepts underlying the organization of a maintenance engineering department and the types of records to be kept for adequate information are discussed. Diagrs.

AMORTIZATION AND DEPRECIATION: WRITING-OFF NEW EQUIPMENT. Sulzer Bros. Ltd. Textile Merc. 141: 297-304 (Sept. 4, 1959). (3450)

The factors which determine the effective working life of a machine are noted, and different methods of calculating depreciation are described and illustrated. Graphs, table, 6 refs.

SESPA NONSLIP FLAT BELT DRIVE. Leder & Cie. Textile Merc. 141: 265-266 (Aug. 28, 1959). (3451)

Belt tension is automatically and continuously adjusted in the Sespa system. Photo, diagr, graphs.

HOW DENSITY AFFECTS RUBBER-COVERED ROLLS. Rodney Hunt Mach. Co. Textile World 109: 218 (Sept. 1959). (3452)

The commonly used standards of rubber density are explained, and the effects of density on roll life are discussed.

CARRIER AIR CONDITIONING SYSTEM: TEXTILE MILL INSTALLATION. Am. Textile Reptr. 73: 43-47, 58 (Sept. 17, 1959). (3453)

Features and advantages of the Carrier Rotaspray Weathermaker installation at Woodside Mills plant at Greenville, S. C., are summarized. Photos.

SCIENCES G

Chemistry G1

STRUCTURE AND PROPERTIES OF POROUS MATERIALS. D. H. Everett and F. S. Stone, eds. Butterworths Scientific Pubns, London. 1958. 389 p. 60s. (3454)

These proceedings of the 10th symposium of the Colston Research Society include the following papers of textile interest: The porous nature of paper, by H. F. Rance, p. 302-321, and The interaction of swelling agents with wool and nylon, by G. King, p. 322-342.

EFFECT OF ALKALI ON THE EXTRACTABILITY OF WOOL PROTEINS; EVIDENCE AGAINST DISULFIDE EXCHANGE AS AN EXPLANATION FOR THE REDUCTION IN SOLUBILITY. J. M. Swan (CSIRO Wool Research Labs.). (Letter to the editor). Textile Research J. 29: 665-667 (Aug. 1959). (3455)

SOURCE BOOK OF THE NEW PLASTICS. H. R. Simonds, ed. Reinhold Pub. Corp., N.Y. 1959. 354 p. $10.00. (3456)

Contents: Introduction; Improvements in established materials; Producers' new materials; Federal-sponsored research; A brief patent survey.

TEXTILE TRENDS AND DETERGENCY. H. C. Borghetty and G. M. Gantz (Gen. Aniline & Film Corp.). Soap Chem. Specialties 35: 63-65, 199 (Sept. 1959). (3457)

How changes in the textile industry are affecting detergent manufacturers. Suggestions are made for needed detergent developments. Graph, 9 refs.

MISCELLANY H

PROCEEDINGS OF THE SECOND TEXTILE MARKET RESEARCH CONFERENCE, New York, New York, May 6-7, 1958. Nat. Cotton Coun. of America, Memphis, Tenn. 1958. 56 p. (3458)

Contribution of marketing research to textile profits, by Textile Analysts Group of New York, p. 1-3; Getting a sales analysis system underway, by P. Bernhardt, p. 3-4; Evaluating sales performance by sales territories, by W. A. Bennett, p. 5-9; Determination of productive capacity, by R. A. Butland, p. 9-12; Wall coverings: a billion yard potential, by C. W. Russell, p. 13-19; Building men's wear markets, by L. C. Pfeifle, p. 19-21; Rainwear: a growth opportunity, by T. Meyers, p. 22-32; Who buys what, by H. L. Breseman, p. 32-36; Keys to bigger sales of carpets and rugs, by E. V. Connett, p. 37-43; Expanding markets through new applications, by R. D. Wells, p. 43-48; Positive selling: enthusiasm, excitement, compatibility, know how, by W. N. Doniger, p. 48-50; Marketing opportunities for textiles, by M. R. Cross, p. 51-55.

SWITZERLAND'S TEXTILE MACHINE INDUSTRY. E. Honegger (Federal Inst. of Technol., Zurich). Swiss Tech. No. 1: 27-45 (1959). (3459)

Recent Swiss textile machinery innovations are reviewed. Photos, diagrs.

TEXTILE WORLD'S FACT FILE. Textile World 109, No. 7M: 1-226 (Mid-July 1959). (3460)

Mill reference data are presented under the following categories: management and supervision, manufacturing, chemical treatment and finishing, and maintenance and engineering. A buyer's guide with a classified list of companies supplying the textile industry is included.

TEXTILES IN NATIONALIST CHINA. D. Frifield (Hamilton Wright Org., Inc.). Textile Inds. 123: 115, 117 (July 1959). (3461)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

COTTON BALE EXTRACTOR. J. N. Garrett. USP 2 894 653, July 14, 1959. (3462)

Hydraulic unit for attachment to a lift truck for pulling selected bales of cotton from stacks.

HULL EXTRACTOR FOR SEED COTTON. A. L. Vandergriff (to Lummus Cotton Gin Co.). USP 2 898 635, Aug. 11, 1959. (3463)

STICK REMOVER ATTACHMENT FOR COTTON HULL EXTRACTOR. J. J. Wallace (to Gullett Gin Co.). USP 2 898 636, Aug. 11, 1959. (3464)

COTTON PRECLEANING APPARATUS FOR REMOVING STICKS, GREEN LEAVES, AND TRASH. J. J. Wallace (to Gullett Gin Co.). USP 2 902 722, Sept. 8, 1959. (3465)

Manmade fibers A2

POLYACRYLONITRILE FIBERS OF IMPROVED DYEABILITY. G. W. Stanton, T. B. Lefferdink, R. W. Meikle, and M. J. Charlesworth (to Dow Chem. Co.). USP 2 899 262, Aug. 11, 1959. (3466)

A water-soluble salt of an N-carboxyalkyl derivative of a polyethylene amine is incorporated in the polymer during spinning.

YARN PRODUCTION B

DRAFTING ROLL UNDERCLEARER MOUNTING. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 893 065, July 7, 1959. (3467)

APPARATUS FOR RECOVERING WASTE COATED FIBERS. W. Wade (to Am. Viscose Corp.). USP 2 895 176, July 21, 1959. (3468)

Waste filter batts from the filtration of cellulose acetate dope are recovered for use in bonded products.

ROTATING TUBE FALSE TWIST CRIMPING APPARATUS. H. A. Schrenk and P. van Dijk (to Am. Enka Corp.). USP 2 893 198, July 7, 1959. (3469)

HIGH SPEED WASHING AND RELAXING THREAD ADVANCING STORAGE REEL. C. H. Goodwin (to Chemstrand Corp.). USP 2 898 756, Aug. 11, 1959. (3470)

FALSE TWIST CRIMPING MACHINE. D. G. Soussloff and R. G. Hilbert (to Universal Winding Co.). USP 2 899 796, Aug. 18, 1959. (3471)

AUTOMATIC PRODUCTION OF BAST FIBERS SUITABLE FOR SLIVER CONVERSION. H. J. Selling and C. Bok (to Novivlas NV). USP 2 901 776, Sept. 1, 1959. (3472)

Bast fibers are automatically and periodically transported to the braking and hackling machines in constant quantities and continuously supplied for sliver conversion.

PICKING AND SHREDDING MACHINE FOR RECLAIMED FIBERS. E. G. Sofio. USP 2 901 777, Sept. 1, 1959. (3473)

Opening, picking, fiber preparation B1

DEVICE FOR PRODUCING FIBER FLEECE. Aschaffenburger Zellstoffwerke AG. BP 813 722, May 21, 1959. Through BCIRA 39: 2692 (1959). (3474)

The fiber is fed through a cyclone apparatus on to a horizontal conveyor belt that carries it to a vertical sieve belt conveyor in front of a suction chamber. Two beating rollers act on the mass of fiber as it travels on the vertical belt, the top roller rotating much faster than the lower one and the distance between them being adjustable. A fleece of uniform thickness is delivered.

COTTON OPENING AND CLEANING MACHINE. Z. Szaloki (to Whitin Mach. Works). USP 2 900 671, Aug. 25, 1959. (3475)

Adjustable deflector, located between two beater cylinders acting successively on fibers delivered by inclined pin-type feed apron, for directing the fibers into a central zone between the beaters.

SELF-FEEDING AND SELF-DOFFING OPENER CLEANER. R. A. Rusca and R. C. Young (to U.S. Secy. Agri.). USP 2 893 064, July 7, 1959. (3476)

Air flow arrangement for feeding and doffing fibers in opener cleaner utilizes a hollow beater cylinder roll clothed with fiber working teeth.

PICKER DRIVE. J. A. Quinn and J. Quinn. USP 2 900 670, Aug. 25, 1959. (3477)

Direct drive from evener mechanism to feeding mechanism to make it possible to control the rate at which the fibers are fed to the evener.

Carding and combing B2

MACHINES FOR GRINDING THE BEARING SURFACES OF CARDING ENGINE FLATS. De Spa et Fils. BP 812 693, Apr. 29, 1959. Through BCIRA 39: 2694 (1959). (3478)

The invention relates to clamps for holding card flat bearings while they are being scraped.

CARD CLOTHING. E. Tempest and G. H. Tempest (to Joseph Sellers & Sons Ltd). BP 812 700, Apr. 24, 1959. Through BCIRA 39: 2693 (1959). (3479)

Card clothing for the rollers of a roller-and-clearer carding engine in which the teeth on one roller automatically clean the teeth of a coacting roller.

HIGH SPEED COMBING MACHINE DETACHING AND PIECING MECHANISM. J. R. Foster (to T.M.M. (Research) Ltd). USP 2 895 177, July 21, 1959. (3480)

HEILMANN COMBING MACHINE CUSHION PLATE MOUNTING. J. S. Dudley (to Whitin Mach. Works). USP 2 898 637, Aug. 11, 1959. (3481)

ADAPTATION OF CARDING ROLLS FOR METALLIC CLOTHING. J. D. Hollingsworth. USP 2 900 672, Aug. 25, 1959. (3482)

Means for avoiding the loss of effective axial length in doffer rolls in converting rolls for use from fillet to metallic clothing.

COMB FOR TEXTILE MACHINE. J. M. J. Sauvage (Belgium). USP 2 901 778, Sept. 1, 1959. (3483)

The comb has a needle-bearing metallic body and plastic coated metallic end plates connected to the body.

LAP FORMING MACHINERY. G. Dakin and T. W. Owen (to Brit. Cotton Ind. Research Assoc.). USP 2 902 723, Sept. 8, 1959. (3484)

WOOL CARDING ENGINE. H. P. Twitchell (to Preston Street Combing Co. Ltd). USP 2 902 724, Sept. 8, 1959. (3485)

Means for separating out the outer portion of the fiber web, as it is being processed by a preopening roller, removing the burrs, and reuniting this portion to the remainder of the web for further burr removal.

Drawing and roving B3

SLIVER COILING. W. H. Watson and W. Slater (to T.M.M. (Research) Ltd). BP 812 644, Apr. 29, 1959. Through BCIRA 39: 2699 (1959). (3486)

To save floor space, conventional cylindrical sliver cans are replaced by a rectangular can divided into compartments of such a size that when the can is brought to a spinning frame each compartment comes opposite a spindle. The coiler head is fitted with a longitudinal traverse motion for filling the compartments.

DRAFTING ROLL WEIGHTING AND SUPPORT. Nazionale Cogne SpA. BP 812 689, Apr. 29, 1959. Through BCIRA 39: 2698 (1959). (3487)

The pressure rolls of each set are supported by an arm pivoted to a shaft for swinging towards and away from the drafting rolls. A lever, also pivoted to the shaft, engages by its free end with means for effecting its angular displacement, and a draw link, connecting the lever to the supporting arm, varies the loading pressure in accordance with the angular displacement.

DRAFTING ROLL ALIGNMENT. J. J. Rieter & Cie AG. BP 813 708, May 21, 1959. Through BCIRA 39: 2697 (1959). (3488)

Means for coupling rollers end to end so that true alignment is maintained.

SLIVER DRAFTING. L. F. Guimbretiere, A. G. Pollet, and E. J. Sorez (France). BP 814 253, June 3, 1959. Through BCIRA 39: 2695 (1959). (3489)

Device by which sliver, fed at a low speed, is gripped in successive fractions across its breadth by a roller that carries a series of small projections and cooperates with rollers that carry an endless rubber belt.

SLIVER OR ROVING DRAFTING. J. M. S. Casanovas (Spain). BP 814 456, June 3, 1959. Through BCIRA 39: 2696 (1959). (3490)

The claims are for drafting systems coupled in tandem for making higher drafts than those obtained hitherto.

ANTIFRICTION MOUNTING FOR TOP DRAFTING ROLLS. K. P. Swanson. USP Reissue 24 687, Aug. 18, 1959. Original No. 2 812 554, Nov. 12, 1957. (3491)

DRAFTING ROLL DRIVE. J. M. J. Sauvage (Belgium). USP 2 895 178, July 21, 1959. (3492)

The top roll is directly driven by a motor, and a coupling means for the lower roll is provided to automatically compensate for differences in speeds of rotation between the rolls occurring when pressure is increased in one or the other of the two rolls.

SLIVER WINDING MACHINE. S. Noda (to Howa Kogyo KK). USP 2 898 726, Aug. 11, 1959. (3493)

Mechanism for winding sliver around a bobbin during its twisting while making possible the replacement of filled bobbins with empty ones without interference from the twisting device.

ROVING FRAME SPINDLE TRAVERSING MECHANISM. G. C. Anderson and D. B. Hopkinson (to Saco-Lowell Shops). USP 2 898 729, Aug. 11, 1959. (3494)

The traversing function is carried out within each individual mechanism, thus eliminating the use of the conventional traversing bolster rail.

DRAWING MACHINERY APRONS. W. R. Brooksbank (England). USP 2 900 673, Aug. 25, 1959. (3495)

Fluted endless aprons designed to better conform to the surfaces of fluted rolls such as are used in wool gilling.

TOP DRAFTING ROLL WEIGHTING. W. W. Werth (to Whitin Mach. Works). USP 2 900 674, Aug. 25, 1959. (3496)

TOP DRAFTING ROLL WEIGHTING. E. Daüsch (to SKF Kugellagerfabriken GmbH). USP 2 900 675, Aug. 25, 1959. (3497)

TRUMPET FOR USE WITH SLIVER DRAFTING MACHINE. J. S. Dudley (to Whitin Mach. Works). USP 2 901 779, Sept. 1, 1959. (3498)

Trumpet construction for producing sliver of increased strength without increased twist.

FLY FRAME WITH INDEPENDENTLY VARIABLE SPEED DRIVES. E. H. Granberry (to West Point Mfg. Co.). USP 2 901 882 and 2 901 883, Sept. 1, 1959. (3499)

Hydraulically operated drives for independently controlling the variable speeds of the bobbin carriage and bobbin rotating means.

Spinning, winding, twisting B4

TRANSMISSION SYSTEM FOR SPINDLE DRIVE. Nazionale Cogne SpA. BP 812 549, Apr. 29, 1959. Through BCIRA 39: 2705 (1959). (3500)

The invention avoids splicing and twisting in cord and tape drives by imposing another driving shaft between the main shaft and the spindles.

SUCTION SYSTEM FOR RING SPINNING MACHINES. Sulzer Frères SA. BP 812 579, Apr. 29, 1959. Through BCIRA 39: 2707 (1959). (3501)

Means for filtering broken ends, dust, and fly from the sucked-in air in a pneumatic system for trapping broken ends, etc.

TEXTILE RUB APRON. D. A. Meyer (to Dayton Rubber Co.). USP 2 899 715, Aug. 18, 1959. (3502)

The base or matrix of the rubbing face of the apron is composed of an elastomeric material in which are embedded hollow, fused silica particles, so that when the rubbing surface is subjected to grinding action before use, the particles will be broken leaving small cavities in the working surface.

TWIST ARRESTORS FOR YARN TWISTERS. Ateliers Roannais de Constructions Textiles. BP 812 636, Apr. 29, 1959. Through BCIRA 39: 2709 (1959). (3503)

To prevent twist from running back along a bundle of filaments on an up- or downtwister, the bundle is made to pass around a triangular or polygonal idler pulley.

BOBBIN. Fonderie de Precision. BP 812 758, Apr. 29, 1959. Through BCIRA 39: 2702 (1959). (3504)

The invention relates to the provision of protuberances at the lower end of a bobbin for increasing its grip on the spindle.

RING TWISTING MACHINES. NV Onderzoekingsinst. Research. BP 813 137, May 6, 1959. Through BCIRA 39: 2710 (1959). (3505)

Each ring is freely movable upwards with regard to the ring rail and may be locked in a position above its traversing trajectory though below the top of a takeup surface placed on the twisting spindle. The rings are fixed to the upper ends of vertical carrier bars that can slide freely up and down through guide openings in the ring rail. The locking mechanism for each ring is a U-shaped spring clamp the legs of which grip into a notch on a carrier bar.

VARIABLE SPEED DRIVE FOR RING SPINNING FRAMES. M. Gerrard, F. Greenhalgh, and E. J. Andrews (to Amalgamated Cotton Mills Trust Ltd). BP 813 224, May 13, 1959. Through BCIRA 39: 2703 (1959). (3506)

For the production of fancy yarns, the relative speeds of any pair of the three basic units (front and back rollers and tin roller shaft) are varied by an independent variable speed drive controlled by a rotary mechanism that is driven slowly from a constant speed drive for the front rollers or the tin roller shaft.

YARN GUIDE ROLLERS. D. Hutchinson (to Fine Spinners & Doublers Ltd). BP 813 409, May 13, 1959. Through BCIRA 39: 2708 (1959). (3507)

The rollers are designed on the principle of the traversing guide rollers having one or two helical grooves in the periphery.

BALLOON CONTROL RINGS. G. M. Bracewell (to Tweedales & Smalley Ltd). BP 814 125, May 27, 1959. Through BCIRA 39: 2701 (1959). (3508)

Control ring of such a radial cross-section that it only functions during that portion of the chase when the balloon length is critical.

SPINNING, TWISTING, OR DOUBLING MACHINE DRIVE. E. Hamel. BP 814 267, June 3, 1959. Through BCIRA 39: 2704 (1959). (3509)

The driving motor is mounted on a bracket carried by the machine frame and drives two rows of spindles through an endless belt and two main shafts. The drive for these shafts is obtained through a Cardan shaft connected by universal joints to the motor shaft and to a shaft carrying a pulley that maintains the tension on the endless belt.

LUBRICATING ARRANGEMENT FOR SPINNING RINGS. Manufacture Alsacienne de Broches. BP 814 225, June 3, 1959. (Addition to BP 764 732). Through BCIRA 39: 2706 (1959). (3510)

The parent invention related to an arrangement in which a supply wick lying in a groove around the ring draws oil from a well in the ring carrier and feeds it to distributor wicks in contact with the surface of the ring where the traveler engages. It is now proposed to lace the distributor wicks through holes in the ring in such a way that both inner and upper bearing surfaces of the ring are lubricated.

FLYERS FOR UPTWISTERS. F. Ridgway (to Arundel, Coulthard & Co. Ltd). BP 814 467, June 3, 1959. (Addition to BP 746 626). Through BCIRA 39: 2700 (1959). (3511)

The parent invention related to a wire with a double hairpin bend fitted into the cap of a flyer to serve as a self-threading yarn guide. In the present invention the wire is bent once or twice around a closed figure (e.g. a circle) and the guide has to be threaded by hand.

SUCTION DEVICE FOR REMOVING BROKEN ENDS ON SPINNING MACHINES. F. Strüber (Germany). USP 2 893 196, July 7, 1959. (3512)

BALLOON CONTROL DEVICE FOR TWISTING AND PLYING APPARATUS. A. W. Vibber. USP 2 893 197, July 7, 1959. (3513)

A strand speed metering device is used for each strand to control variations in balloon diameter.

CUP SPRING SPINDLE MOUNTING. G. Meyer-Busche (Germany). USP 2 894 365, July 14, 1959. (3514)

THREAD CHEESE-EJECTING DEVICE FOR SUSPENDED CENTRIFUGAL SPINNING CANS. C. Gardella (Italy). USP 2 895 283, July 21, 1959. (3515)

EXHAUST HEAT CONTROL SYSTEM FOR SPINNING ROOMS. A. H. Bahnson, Jr. USP 2 898 727, Aug. 11, 1959. (3516)

Arrangement for controlling the heat originating in spinning frame motors and in the motor and fan powering the suction system for clearing the frames.

TENSION DEVICE FOR DOUBLE-TWIST HOLLOW SPINDLE. M. Fleuret (to Soc. Rhodiaceta). USP 2 898 728, Aug. 11, 1959. (3517)

APPARATUS FOR DOFFING SPINNING MACHINE LINT COLLECTION CHAMBERS. E. G. Byrum, Jr. (to Bahnson Co.). USP 2 901 881, Sept. 1, 1959. (3518)

PLYING DEVICE YARN GUIDE. H. A. Schrenk and J. W. I. Heijnis (to Am. Enka Corp.). USP 2 902 817, Sept. 8, 1959. (3519)

Grooved roller of a thread guide is mounted so that its axis of rotation coincides with that of the rotatable thread guiding system.

DRAFTING APPARATUS. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 899 714, Aug. 18, 1959. (3520)

Band guide cradle and tensor arrangement for guiding and controlling the fibers passing from the nipping point to the delivery opening.

BOBBIN TIP PAINTING APPARATUS. H. E. Freeze. USP 2 900 954, Aug. 25, 1959. (3521)

SPRING WEIGHTING DEVICE FOR DRAFTING ROLLERS OF SPINNING MACHINES. H. L. P. Ude (to Schiess AG). USP 2 902 725, Sept. 8, 1959. (3522)

SPINDLE SAFETY STOP. G. Schöllkopf (Germany). USP 2 902 818, Sept. 8, 1959. (3523)

Means for securing spindles in position on the spinning rail during cop or yarn package removal.

Yarns B5

METHOD OF MANUFACTURING UNTWISTED PLIED YARN. R. G. Hilbert (to Universal Winding Co.). USP 2 895 285, July 21, 1959. (3524)

Strands of twisted continuous filament yarns are plied together without twisting by plucking out loops from the surfaces of each of the filaments and entangling them with each other.

PREPARATION OF BULKY WOOL YARN. R. A. O'Connell (to U.S. Secy. Agri.). USP 2 895 286, July 21, 1959. (3525)

Wool yarn of increased bulk and loftiness is prepared by treating the yarn with a swelling agent, stretching, setting the yarn while in the stretched state, plying the yarn, and relaxing it while untensioned.

BULK RAYON YARN. H. Yoo (to Am. Viscose Corp.). USP 2 895 287, July 21, 1959. (3526)

Bulk yarn is produced by supertwisting a resin spun rayon yarn, setting the twist by treating with formaldehyde and curing in the presence of an acidic catalyst to effect cross-linkage between formaldehyde, resin, and cellulose, and subsequently detwisting.

PRODUCTION OF BULKY COLORSPUN RAYON YARN. H. Yoo (to Am. Viscose Corp.). USP 2 895 288, July 21, 1959. (3527)

Colorspun rayon yarn is supertwisted, treated with formaldehyde and heat to set the twist, cured to effect cross-linkage between the formaldehyde and cellulose, and detwisted.

IMPROVED ADHESION OF TIRE CORD TO RUBBER. C. W. Schroeder (to Shell Develop. Co.). USP 2 902 398, Sept. 1, 1959. (3528)

The tire cord is treated with a polyepoxide and a curing agent and after drying is bonded to rubber containing a fusible condensate of an aldehyde and a phenol, urea, melamine, or ketone.

BONDING BUTYL RUBBER TO TIRE CORDS. S. B. Robison and F. P. Baldwin (to Esso Research & Eng. Co.). USP 2 895 850, July 21, 1959. (3529)

Tire cord is coated with a phenol formaldehyde resin to improve its adhesion to butyl rubber.

METHOD OF APPLYING ADHESIVE TO TIRE CORDS. S. Salem (to Gen. Tire & Rubber Co.). USP 2 898 664, Aug. 11, 1959. (3530)

The penetration of adhesive into the cord is reduced by wetting the cord prior to adhesive application.

UNIVERSAL FALSE TWIST TYPE SPINNING AND TWISTING UNIT. E. Bobkowicz (Canada). USP 2 900 782, Aug. 25, 1959. (3531)

Apparatus for inserting a heat-welded locked twist into semi-plastic bonded fiber strips or yarns.

MULTIPLE CORE YARN. J. V. Weinberger and H. A. Delcellier (to Canada Minister of Nat. Defence). USP 2 901 884, Sept. 1, 1959. (3532)

The yarn is produced by twisting together two core yarns formed by wrapping a roving of fibers around a filament yarn.

PLASTIC SEWING THREAD SPOOL. L. H. Morin (to Coats & Clark, Inc.). USP 2 902 234, Sept. 1, 1959. (3533)

SNAP-ON RIMS FOR PLASTIC SEWING THREAD SPOOLS. L. H. Morin (to Coats & Clark, Inc.). USP 2 902 235, Sept. 1, 1959. (3534)

ELASTIC YARN. W. E. Ross (to Rayflex, Inc.). USP 2 902 819, Sept. 8, 1959. (3535)

High tensile strength yarns of thin gage for stretch garments are composed of an elongated latex rubber filament core, helically wrapped with another elongated latex filament, and a fibrous filament helically wrapped in the opposite direction.

STRETCH YARN. H. S. Bronson and M. F. Felt (to Portage Hosiery Co.). USP 2 902 820, Sept. 8, 1959. (3536)

The yarn consists of a core of two strands of Helanca or nylon stretch yarn interlocked by rubbing action and twisting with wool fibers.

FABRIC PRODUCTION C

BOBBIN CARRIER FOR BRAIDING MACHINES. A. G. Herzog (Germany). USP 2 895 371, July 21, 1959. (3537)

Warping, slashing, yarn preparation C1

TRAVERSE GUIDE FOR THE TIGHT WINDING OF FLANGED SPOOLS. Etablissements G. Decombe. BP 812 718, Apr. 29, 1959. Through BCIRA 39: 2736 (1959). (3538)

COP WINDERS. J. K. P. Mackie (to James Mackie & Sons Ltd). BP 813 051, May 6, 1959. Through BCIRA 39: 2734 (1959). (3539)

The traverse guide for laying yarn on the nose of the cop is also the tensioning member. The traverse guide is formed with two fingers pivoted together at one end and capable of adjusting to any desired angular separation. The facing surfaces of the fingers are formed with a series of curved "lands," the humps in one coming opposite troughs in the other, thus presenting a tortuous path for the yarn.

STOP MOTION FOR HIGH-SPEED YARN WINDING MACHINE. E. Brierley (to Thomas Holt Ltd). BP 813 681, May 21, 1959. Through BCIRA 39: 2735 (1959). (3540)

UNWINDING APPARATUS FOR WARP BEAMS. Gebrüder Sucker GmbH. BP 814 103, May 27, 1959. Through BCIRA 39: 2738 (1959). (3541)

Individual warp beams on a multiple beam frame are driven simultaneously from a common source through a ratio-adjusting device for each beam. This comprises a pair of conical pulleys that can be separated to an adjustable extent and are driven by a flexible belt of hexagonal cross-section.

TRAVERSE DEVICES FOR WINDING FRAMES. R. Junghanss and M. Kühnrich (to VEB Spinn- und Zwirnerei-Maschinenbau). BP 814 293, June 3, 1959. Through BCIRA 39: 2737 (1959). (3542)

A thread traverse for winding conical-ended packages consists of two cylindrical drum parts between which is a separate core part, all mounted on a common shaft. The drum parts can slide along the shaft to vary the width of the gap between their opposed edges.

WINDING MACHINE TENSION DEVICE. R. Maier (to Am. Feldmuehle Corp.). USP 2 900 144, Aug. 18, 1959. (3543)

Detachable wear members of sintered aluminum oxide are claimed for tension devices of the washboard type.

Weaving C2

ADJUSTING AND SAFETY MEANS FOR THE HAMMER OF THE BOBBIN CHANGER IN LOOMS. Metapic SA. BP 812 587, Apr. 29, 1959. Through BCIRA 39: 2741 (1959). (3544)

The hammer is pivoted to one end of a link that is pivoted at the other end to a rocking lever, in such a way that the limit of the stroke of the hammer is determined by the alignment of the pivoting axes.

WEFT NEEDLE OPERATING MECHANISM FOR NARROW LOOM. R. G. Turner (to Crompton & Knowles Corp.). USP 2 902 057, Sept. 1, 1959. (3545)

Needle carrier control means for giving the needle an accelerated motion while in the warp shed and a retarded motion while out of the shed to provide sufficient time for changing warp sheds between successive needle insertions.

LOOM BUFFER. W. R. Brooksbank. BP 813 874, May 27, 1959. Through BCIRA 39: 2742 (1959). (3546)

A removable buffer or picking pad is formed with transverse slots through which the lug or checking strap is threaded.

WEFT YARN CUTTING DEVICE. Valentin Patent Gesellschaft GmbH and Textilmaschinenfabrik Schwenningen GmbH. BP 814 227, June 3, 1959. Through BCIRA 39: 2743 (1959). (3547)

Yieldable coupling for displacing the shear head towards the lay in a device for severing the trailing end of yarn after weft replenishment on an automatic loom.

CLOTH TAKEUP MECHANISM FOR CIRCULAR LOOM. J. Rabeux and B. Masson (to Soc. d'Applications Generales d'Electricite & de Mecanique). USP 2 893 439, July 7, 1959. (3548)

Mechanism for drawing off tubular fabrics without deforming the weft yarns while keeping the fabric edges straight.

RECTILINEAR LOOM. G. Brusadelli (to Developpement Textile SA). USP 2 893 440, July 7, 1959. (3549)

A rotary drum is substituted for the heddle and beater complex constituting the lay.

CONSTANT RATE LOOM LETOFF. T. J. Oliver (to H. F. Livermore Corp.). USP 2 893 441, July 7, 1959. (3550)

SELVAGE CONSTRUCTION. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). USP 2 893 443, July 7, 1959. (3551)

Through loops in the fabric selvages formed by a continuous weft thread, a second weft thread made up of a series of U-shaped lengths is inserted alternately from opposite sides of the fabric.

HYDRAULIC PICKER STICK CHECK FOR MULTIPLE BOX LOOMS. A. E. Zarn (Switzerland). USP 2 894 540, July 14, 1959. (3552)

SHUTTLE BINDER OR CHECK. J. M. Budzyna (to Draper Corp.). USP 2 898 946, Aug. 11, 1959. (3553)

APPARATUS FOR SEPARATING MAGNETIZABLE WARP DETECTOR DROP WIRES. S. S. C. Fleischer (Denmark). USP 2 899 736, Aug. 18, 1959. (3554)

REED ADJUSTMENT DEVICE. J. Picanol (Belgium). USP 2 899 986, Aug. 18, 1959. (3555)

TURNBUCKLE FOR LOOM HARNESS FRAME. B. Hayden. USP 2 900 203, Aug. 18, 1959. (3556)

REMOVABLE MULTIPLE HARNESS ATTACHMENT FOR HAND LOOMS. O. A. Knopf. USP 2 903 019, Sept. 8, 1959. (3557)

LOOM PITCH BAND REED. F. H. Kaufmann (to Steel Heddle Mfg. Co.). USP 2 901 004, Aug. 25, 1959. (3558)

WEFT MECHANISM FOR SHUTTLELESS LOOMS. J. R. Walton (to Chicopee Mfg. Corp.). USP 2 902 058, Sept. 1, 1959. (3559)

The weft carrier comprises a hollow tube with an orifice at one end through which the charge of weft yarn is drawn by suction at the refilling station. The carrier is constructed to traverse the warp a predetermined number of picks until its charge is exhausted and it moves to the replenishing source.

PICKER STICK CHECK. H. H. McClamroch. USP 2 903 020, Sept. 8, 1959. (3560)

A single spring arrangement is used to check the picker stick motion in both directions.

Knitting C3

HAND OPERATED FLAT KNITTING MACHINE FOR RIB KNIT FABRIC. J. Kuntz (to Gerhard Kochheim). USP 2 893 225, July 7, 1959. (3561)

KNITTING MACHINE FOR TERRY FABRICS. V. Lombardi. USP 2 893 226, July 7, 1959. (3562)

SINKER CAP FOR CIRCULAR KNITTING MACHINE. E. St. Pierre (to Hemphill Co.). USP 2 893 227, July 7, 1959. (3563)

YARN SUPPLY MECHANISM FOR KNITTING MACHINES. A. Shortland (England). USP 2 893 228, July 7, 1959. (3564)

Yarn trapper device automatically actuated in timed relation with the yarn picking mechanism for producing stripes, patterns, or designs in knit fabrics.

APPARATUS FOR CUTTING AND BINDING YARNS IN SOLID PATTERN HOSIERY KNITTING. S. J. Haddad (to So. Mill Equip. Corp.). USP 2 893 229, July 7, 1959. (3565)

LOOP TRANSFER DEVICE FOR KNITTING MACHINES HAVING ANGULARLY DISPOSED BEDS. C. F. Miller and T. C. Lyster (to Wildman Jacquard Co.). USP 2 895 317, July 21, 1959. (3566)

PICK FOR INDEPENDENT NEEDLE KNITTING MACHINE. E. St. Pierre (to Hemphill Co.). USP 2 898 752, Aug. 11, 1959. (3567)

WEFT BAR OPERATING MEANS FOR STRAIGHT BAR FULL-FASHIONED HOSIERY MACHINES. K. P. Bauer, G. Bitzer, and H. E. Haehnel (to Textile Mach. Works). USP 2 898 753, Aug. 11, 1959. (3568)

Mechanism for automatically operating the welt bars to disengage the welt hooks of the bars from the fabric loops following welt turning.

HOSIERY INSPECTION AND THREAD SEVERING APPARATUS. C. A. Miles, L. B. Swanner, G. E. Bennett, R. M. Matthews, and R. Bailey (to Alamance Inds.). USP 2 898 021 and 2 898 023, Aug. 4, 1959. (3569)

Conventional gray inspection machine with mechanism for automatically severing the stitching connecting successively seamed stockings during inspection.

METHOD OF KNITTING AN UNDERGARMENT AS A SINGLE, FULL-FASHIONED PIECE. A. M. Harms (to Harms Hosiery Co.). USP 2 898 754, Aug. 11, 1959. (3570)

HOSIERY CLIPPING AND EVERTING MACHINE. S. S. Long and B. B. Cox (to Paul Knitting Mills). USP 2 899 116, Aug. 11, 1959. (3571)

SELVAGE CONTROL MECHANISM FOR STRAIGHT BAR KNITTING MACHINES. E. Start and L. Brown (to William Cotton Ltd). USP 2 899 811, Aug. 18, 1959. (3572)

COMBINED WARP AND WEFT KNIT FABRIC. W. B. A. Attenborough (England). USP 2 899 812, Aug. 18, 1959. (3573)

Fabric composed of interknitted weft and warp knit portions of contrasting colors in an adjoining course-wise relationship are claimed.

KNITTED PILE FABRICS. G. E. Herrnstadt and J. L. Hubbard (to Firth Carpet Co.). USP 2 899 813, Aug. 18, 1959. (3574)

The fabrics have a backing formed of chain stitch warps, base wefts extending across several warps, and pile tufts bound in the backing by bights of the warps.

STRIPING MECHANISM FOR CIRCULAR KNITTING MACHINE. T. J. Thore (to Fidelity Mach. Co.). USP 2 901 900, Sept. 1, 1959. (3575)

SELF-SUPPORTING KNEE-LENGTH STOCKING. P. Baker (to Julius Kayser & Co.). USP 2 901 901, Sept. 1, 1959. (3576)

The stocking has an elastic top-zone above the calf of the leg, an intermediate two way stretch zone, and a nonelastic bottom zone.

HOSIERY INSPECTION AND TRIMMING APPARATUS. T. H. De Spain (to So. Textile Machy. Co.). USP 2 902 193, Sept. 1, 1959. (3577)

Means are provided for directing air under pressure through the inspection form to raise loose threads from the hosiery to facilitate trimming.

JACQUARD CONTROLLED FLAT KNITTING MACHINE. W. Radhuber, Sr. USP 2 902 846, Sept. 8, 1959. (3578)

Machine capable of links and links, reverse jersey, tuck, or no knitting upon changing the cooperation of controlling cams and jacquard mechanism.

MULTIFEED CIRCULAR HOSIERY MACHINES. J. J. McDonough (to Scott & Williams, Inc.). USP 2 902 845, Sept. 8, 1959. (3579)

Mechanisms for prevention of drop stitches at or near the heel or toe suture during reciprocatory knitting of heels and toes.

KNITTING MACHINE NEEDLE HOLDER. K. Kohl (to Karl Mayer GmbH). USP 2 902 847, Sept. 8, 1959. (3580)

Removable unitary needle holders for spring beard or latch type needles which may be quickly removed from the needle bar and replaced by a similar unit to reduce machine stoppage to a minimum.

KNITTING MACHINE BOBBIN HOLDER AND YARN GUIDE. M. B. Striar. USP 2 902 848, Sept. 8, 1959. (3581)

The bobbin holder and yarn guide are located so as to reduce the height of the machine and make possible bobbin replenishment without the use of stepladders.

Fabrics C4

WOVEN VENETIAN BLIND LADDER WEBBING. R. French (to T. French & Sons Ltd). BP 812 684, Apr. 29, 1959. (Addition to BP 722 090). Through BCIRA 39: 2744 (1959). (3582)

Weaving of cross straps in ladder webbing so that each strap overlies an end of the preceding strap and is overlaid at its other end by the next strap.

REINFORCED GLASS FIBER REINFORCED LAMINATES. D. A. Leader (to Trylon Ltd). BP 813 535, May 21, 1959. Through BCIRA 39: 2876 (1959). (3583)

A reinforcing material (e.g. glass fiber fabric) for making a laminate from an unsaturated polyester resin is impregnated with a polymerization catalyst (e.g. benzoyl peroxide emulsion) for the resin and a binding agent (e.g. methyl methacrylate polymer).

PROCESS FOR THE MANUFACTURE OF PAPER-LIKE MATERIALS FROM SYNTHETIC FIBERS. W. Neumann (to C. F. Roser GmbH). USP 2 891 279, June 23, 1959. (3584)

A web of loosely interlaced synthetic fibers is subjected to heat and pressure at spaced intervals to effect fusion of the fibers at the pressure points while maintaining the fiber integrity.

FORMATION OF FELT-LIKE PRODUCTS FROM POLYTETRAFLUOROETHYLENE FILAMENTS. H. G. Lauterbach (to E.I. du Pont de Nemours & Co.). USP 2 893 105, July 7, 1959. (3585)

The felt is prepared by forming a loose batt containing a substantial proportion of retractable polytetrafluoroethylene filaments, forcibly orienting small separated groups of the retractable filaments at intervals into positions substantially perpendicular to the ultimate faces of the product, and then retracting the retractable filaments at least 15% by appropriate treatment with heat.

REINFORCING WOVEN GLASS FABRICS FOR MAKING LAMINATED ARTICLES. P. Genin (France). USP 2 893 442, July 7, 1959. (3586)

The yarns serving as reinforcement for the laminates are not interlaced directly with one another but are held in place by means of thinner auxiliary yarns to reduce sinuous patterns which interfere with the high modulus of elasticity required.

PACKING, STORING, AND SHIPPING DEVICE FOR PILE FABRICS. S. Schwartz. USP 2 895 604, July 21, 1959. (3587)

Device for holding the fabric in continuous accordion folds with the pile spaced apart and protected by the backing material.

NARROW FABRIC PRODUCTION. K. Kitahara (Japan). USP 2 898 663, Aug. 11, 1959. (3588)

Narrow fabrics are produced by weaving a special wide fabric containing synthetic fiber wefts and interwoven metal wires parallel to the warp and cutting the wide fabric by electrically heating the interwoven wires.

TIRE CORD FABRIC WITH REMOVABLE WEFT THREAD. S. Salem, R. E. Bingham, and D. Anderson (to General Tire & Rubber Co.). USP 2 898 665, Aug. 11, 1959. (3589)

Tire cord fabric for use in making weftless rubber tires contains water-soluble polyvinyl alcohol weft threads which may be easily removed prior to or during treatment of the fabric to obtain the advantages of weftless fabric.

MULTIPLE NEEDLE TUFTING MACHINE. M. B. Penman (to Magee Carpet Co.). USP 2 898 876, Aug. 11, 1959. (3590)

Pattern controlled circuit making and breaking mechanism for controlling electronic means for gripping and holding yarns supplied to the needles.

MULTIPLE PILE CARPET FABRIC. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 898 947, Aug. 11, 1959. (3591)

Weaving time is reduced by using only one heddle to manipulate both one pile warp set and one binder warp set, using only as many heddles as there are pile warp sets.

PILE CARPETS WITH PILE CONTAINING LOOPS AND TUFTS. D. Karpoff (to Mohasco Inds.). USP 2 899 985, Aug. 18, 1959. (3592)

Method of weaving carpets in which the pile is made up of a combination of single and float loops and tuft legs resulting from the cutting of loops.

TUFTED CARPET BACKING. H. A. Schwartz (to Patchogue-Plymouth Corp.). USP 2 901 005, Aug. 25, 1959. (3593)

Woven backing material of increased tensile strength composed of high wet strength twisted paper warps and of composite jute and glass fiber weft yarns.

BODY ARMOR FABRIC. W. S. Finken and H. K. Robinson (to Gentex Corp.). USP 2 899 987, Aug. 18, 1959. (3594)

Unitary ballistic fabric composed of superimposed, vertically aligned layers of weft yarns and warp yarns which alternately pass perpendicularly through the layers between pairs of adjacent columns of weft yarns from top to bottom of the fabric and then diagonally up through the weft yarn layers from bottom to top of the fabric.

PRODUCTION OF NONWOVEN FABRICS. R. A. O'Connell (to U. S. Secy. Agri.). USP 2 900 291, Aug. 18, 1959. (3595)

Porous, flexible nonwoven fabrics are obtained by coating one batch of fibers with a polyepoxide bonding agent and a second batch of fibers with a polyamide bonding agent, blending to form a uniform mass, compacting, and spot bonding the resultant web.

GLASS FIBER MAT. P. J. Frickert (to Owens-Corning Fiberglas Corp.). USP 2 900 700, Aug. 25, 1959. (3596)

Glass fabric mats for use in reinforcing plastics or for insulation are produced by directing a glass strand or filament into a base material such as a woven screen or a nonwoven fabric so as to form interlocking loops in the spaces of the base material.

ABSORBENT WIPING SHEET. H. W. Hirschy, C. H. Rowe, and K. J. Harwood (to Kimberly-Clark Corp.). USP 2 902 395, Sept. 1, 1959. (3597)

The sheet is made up of a layer of crepe tissue paper plies and a protective grille of nonwoven open mesh netting of multifilament threads.

METHOD OF MAKING A PILE FABRIC. S. L. St. John (to Dike, Thompson & Sanborn). USP 2 902 397, Sept. 1, 1959. (3598)

A base sheet is formed into pleats separated by valleys with an adhesive coating for bonding pile filaments between the pleats.

APPARATUS FOR PRODUCING NEEDLED NONWOVEN BATTS WITHOUT DISTORTION. A. W. Bateman (to E. I. du Pont de Nemours & Co.). USP 2 902 746, Sept. 8, 1959. (3599)

ENDLESS FOURDRINIER CLOTH MADE OF SYNTHETIC FIBERS. G. R. Holden and A. Schiff (to F. C. Huyck & Sons). USP 2 903 021, Sept. 8, 1959. (3600)

FINISHING AND CHEMICAL PROCESSING D

ENDLESS CONVEYOR FOR USE IN TREATING FABRIC LENGTHS. R. Coburn (to Flaxall Prods. Ltd). USP 2 895 732, July 21, 1959. (3601)

Endless conveyor with means for automatically folding and supporting the fabric at intervals to form freely suspended loops.

PATTERNED FLOCK FABRIC PRODUCTION. E. Weiss (to Heberlein Patent Corp.). USP 2 901 373, Aug. 25, 1959. (3602)

Chemical processes D1

WATER REPELLENT SILICONE EMULSIONS CONTAINING TITANATE ESTERS. Monsanto Chemicals Ltd. BP 812 505, Apr. 29, 1959. (Addition to BP 804 989). Through BCIRA 39: 2879 (1959). (3603)

A composition for imparting water-repellency to textiles comprises a silicone resin emulsion containing as catalyst an ester of titanic acid with a dihydric alcohol, e.g. ethylene or propylene glycol or a butane-diol. The ester is obtained by treating titanium tetrachloride with the dihydric alcohol and adding triethanolamine to reduce the acidity.

PRETREATMENT OF CELLULOSE TEXTILES FOR BLEACHING. L. Chesner and G. C. Woodford (to Laporte Chemicals Ltd). BP 812 752, Apr. 29, 1959. Through BCIRA 39: 2851 (1959). (3604)

Cellulosic materials are treated, prior to bleaching, with a solution of an inorganic peracid (e.g. permonosulfuric) at pH below 7 and temperature 15-80° C.

CONTINUOUS BLEACHING OF CELLULOSIC TEXTILE MATERIALS. W. A. S. White and N. F. Crowder (to Imp. Chem. Inds. Ltd). BP 812 893, May 6, 1959. Through BCIRA 39: 2850 (1959). (3605)

The fabric is treated in open-width as follows: (1) extraction with trichloroethylene at 80-87° C or perchloroethylene at 110-120° C; (2) excess solvent is flashed off in a bath of water at 90° C; (3) desizing by padding with an alkaline peroxide solution followed by steaming; (4) padding with a chlorite solution followed by steaming.

SOLVENT DEGREASING AND DEWAXING OF VEGETABLE FIBERS. W. A. S. White and H. J. Ross (to Imp. Chem. Inds. Ltd). BP 812 894, May 6, 1959. Through BCIRA 39: 2849 (1959). (3606)

In a continuous process for extracting natural and applied waxy, fatty, and oily matter, cellulosic cloth in open width is immersed in hot tri- or per-chloroethylene, mangled and passed through hot water to flash off remaining solvent. The examples relate to the treatment of gray cotton cloth, linen drill, and jute hessian.

NYLON FINISHING. Heberlein & Co. AG. BP 813 289, May 13, 1959. Through BCIRA 39: 2874 (1959). (3607)

Heat-set nylon fabrics are treated with a solution of an inorganic swelling agent ($ZnCl_2$, $CaCl_2$, $Ca(CNS)_2$, LiBr, HCl, H_2SO_4, H_3PO_4, or HNO_3) containing up to 50% of an organic solvent (butyl, amyl or benzyl alcohol, or cyclohexanol), dried, washed, and dried. The treatment modifies the flaccid handle and greasy appearance of nylon fabrics. The agent may be applied locally, with methylcellulose as thickener.

PERMEABLE VINYL RESIN COATED FABRIC. R. J. Wilhelm and C. A. Waugaman (to B. F. Goodrich Co.). USP 2 894 855, July 14, 1959. (3608)

COATING TEXTILE FILAMENTS OR YARNS. P. F. Pascoe (to Whiffen & Sons Ltd). BP 813 790, May 21, 1959. Through BCIRA 39: 2711 (1959). (3609)

An irregular coating, with bubbles in the surface, is produced by applying to the filaments or yarns a plastic (e.g. polyvinyl chloride or polystyrene) containing an azoic blowing agent that decomposes when heated. Among suggested applications are the production of filaments having a scaly surface and warm handle like wool, and the production of rayon tire cord with better bonding to rubber.

CREASEPROOFING VISCOSE RAYON. C. B. Ratcliffe and H. F. Wise (to Courtaulds Ltd). BP 813 794, May 21, 1959. Through BCIRA 39: 2873 (1959). (3610)

The brittleness that sometimes accompanies the application of a resin precondensate to viscose fabrics in the crease resist finish is overcome by adding a ketone (e.g. acetone) to the solution.

OPTICAL BRIGHTENING OF ACRYLIC FIBERS. J. R. Geigy AG. BP 813 843, May 27, 1959. Through BCIRA 39: 2852 (1959). (3611)

Polyacrylonitrile products (e.g. Orlon yarns) are given attractive bluish- and greenish-white shades by boiling them in very dilute, acidified solutions of certain fluorescent monomethine cyanines.

WASH AND WEAR TREATMENT OF CELLULOSIC FABRICS. W. G. Cameron (to Courtaulds Ltd). BP 813 919, May 27, 1959. Through BCIRA 39: 2872 (1959). (3612)

The ironing characteristics (drip dry) of cellulosic fabrics (e.g. viscose rayon) are improved by treating the fabric in open-width with a swelling agent (e.g. caustic soda), washing and drying, without creasing, impregnating with an acetone/formaldehyde resin precondensate containing an alkaline catalyst (e.g. sodium carbonate), drying, and baking.

DIMENSIONALLY STABILIZING TEXTILE MATERIALS. T. W. Watson (to Midland Silicones Ltd). BP 813 925, May 27, 1959. Through BCIRA 39: 2871 (1959). (3613)

The material is impregnated with an aqueous emulsion of (1) a dialdehyde (preferably glyoxal), (2) an amine/aldehyde condensate (e.g. melamine/formaldehyde precondensate), (3) a methyl hydrogen polysiloxane and a hydroxylated methyl polysiloxane, and (4) an acid catalyst (e.g. an alkanolamine hydrochloride), dried, and baked.

DEVICE FOR THE FLUID TREATMENT OF TEXTILE MATERIALS. Gebrüder Sucker GmbH. BP 814 127, May 27, 1959. Through BCIRA 39: 2739 (1959). (3614)

In treatments involving direct contact of a fabric with a fluid (steaming, heating, sizing, desizing, mercerizing, drying, etc.) impulses of 0.1 to 16 cycles/sec are set up in the fluid, e.g. by means of a flap blind opened and closed by a rod, or a 2-part valve.

SILVER COATING GLASS FILAMENTS. H. B. Whitehurst (to Owens-Corning Fiberglas Corp.). USP 2 900 274, Aug. 18, 1959. (3615)

PROCESS FOR MAKING FIRE RETARDANT CELLULOSIC ARTICLES. R. R. Dreisbach and J. L. Lang (to Dow Chem. Co.). USP 2 900 279, Aug. 18, 1959. (3616)

Cellulosic textiles are rendered durably fire retardant without altering softness and tensile strength by immersion in an aqueous solution consisting of the reaction product of a alkylene polyamine with an acid from the group consisting of phosphoric acid and boric acid, insolubilizing the reaction product by further reaction with an organic acid such as acetic acid, oxalic acid, or 2,4-dibromosuccinic acid, and subsequently drying the treated article.

1-AZIRIDINYL PHOSPHINE OXIDE AND SULFIDE POLYMER FLAMEPROOFING AGENTS. L. H. Chance, G. L. Drake, Jr., and W. A. Reeves (to U.S. Secy. Agri.). USP 2 901 444, Aug. 25, 1959. (3617)

ANTISTATIC COMPOSITION. D. M. Gagarine and H. Repokis (to Deering Milliken Research Corp.). USP 2 901 451, Aug. 25, 1959. (3618)

Resinous products of a polyester of a dicarboxylic unsaturated acid and a polyglycol compound are claimed.

CREASEPROOFING AND SHRINKPROOFING AGENT FOR CELLULOSE FABRICS. M. D. Hurwitz (to Rohm & Haas Co.). USP 2 901 463, Aug. 25, 1959. (3619)

Discoloration due to chlorination and loss of strength are minimized by the use of aqueous solutions containing tetrahydro-s-triazones and a condensate of formaldehyde with melamine, urea, or ethyleneurea.

PEROXIDE BLEACHING OF COTTON CLOTH. S. M. Rogers (to Allied Chem. Corp.). USP 2 903 327, Sept. 8, 1959. (3620)

Process for effecting bleaching of cotton with reduced amount of hydrogen peroxide containing sodium silicate as an additive.

SHRINKPROOFING CELLULOSIC MATERIALS. B. H. Kress (to Quaker Chem. Prods. Corp.). USP 2 903 328, Sept. 8, 1959. (3621)

The cellulose fabrics are treated with polymeric acetal condensation products of ethylene oxide and formaldehyde and cured under acidic conditions.

WATERPROOFING CELLULOSIC FABRICS. R. J. Berls (to Armour & Co.). USP 2 903 382, Sept. 8, 1959. (3622)

Alkenylsuccinic acids and anhydrides are claimed as waterproofing agents.

TREATMENT OF WOOL SCOURING WASTE. W. Fong (to U. S. Secy. Agri.). USP 2 903 424, Sept. 8, 1959. (3623)

The waste liquor is treated with colloidal bentonite to recover the grease and clarify the liquor to reduce its pollutional characteristics.

OXIDIZING AND OPTICAL BLEACHING AGENT. C. Butler (to Am. Cyanamid Co.). USP 2 903 430, Sept. 8, 1959. (3624)

The bleach comprises 30% by weight of sodium perborate and 0.01 to 2.0% by weight of 4-methyl-7-dimethylaminocoumarin.

Dyeing and printing D2

COLORED DECORATIVE EFFECTS ON TEXTILES. G. W. Madaras and G. Landells (to Bradford Dyers' Assoc. Ltd). BP 812 697, Apr. 29, 1959. Through BCIRA 39: 2864 (1959). (3625)

Fabrics made wholly or substantially of cellulose acetate (especially the triacetate) are subjected to local pressure according to the desired pattern and then padded with a dye. The compressed areas dye in darker shades. A swelling agent (e.g. ammonium thiocyanate) may be applied after the local compression or with the dye liquor.

SILK SCREEN PRINTING. G. Noble (to Screen Process Supplies Ltd). BP 813 007, May 6, 1959. Through BCIRA 39: 2865 (1959). (3626)

Apparatus for stretching material to a silk screen printing frame comprises a rotatable member, square in cross-section, clamped to one side of the frame. The material to be printed is secured to the member by U-shaped clips and the member is then turned by means of a handle.

COLORATION OF CELLULOSE TRIACETATE. H. C. Olpin and J. A. Bright (to Brit. Celanese Ltd). BP 813 610, May 21, 1959. Through BCIRA 39: 2858 (1959). (3627)

Cellulose triacetate materials are dyed in aqueous baths of azo and disperse dyes at temperatures of at least 110° C. The material, saturated with the dye liquor, may be exposed to hot steam or the liquor may be pumped repeatedly through the material in a pressure system.

ALDEHYDE CONDENSATION PRODUCTS FOR IMPROVING THE WETFASTNESS OF DIRECT DYEINGS. Ciba Ltd. BP 814 288, June 3, 1959. Through BCIRA 39: 2855 (1959). (3628)

METHOD AND MEANS FOR REELING OF YARN. H. Buddecke (Germany). USP 2 889 610, June 9, 1959. (3629)

The yarn is continuously wound on one end of a reel drum into hanks which are bound into separate bunches, so that yarn may be uniformly dyed and dried.

DYEING ACRYLONITRILE COPOLYMERS. H. Waning (to Naamlooze Vennootschap Kunstzijdespinnerij Nyma). USP 2 900 217, Aug. 18, 1959. (3630)

Copolymers of acrylonitrile with methyl acrylate, methyl methacrylate, and vinyl acetate may be dyed in a neutral bath above 100° C with metalliferous azo dyes without sulfonic acid groups and having two molecules of dye per molecule of metal.

DYEING NITROGENOUS AND NYLON FIBERS WITH HIGH AFFINITY WOOL DYES. C. J. Gray (to Deering Milliken Research Corp.). USP 2 900 218, Aug. 18, 1959. (3631)

Level shades are obtained with milling colors by the addition of a guanidine compound, e.g. a symdiarylguanidine, to the dyebath.

PACKAGE DYEING GLASS FIBERS SIZED WITH A WATER SWELLABLE MATERIAL. R. N. Kingsbury and R. F. Caroselli (to Owens-Corning Fiberglas Corp.). USP 2 900 275, Aug. 18, 1959. (3632)

PIGMENTED OIL-IN-WATER EMULSION PRINTING PASTE WITH IMPROVED RESISTANCE TO ABRASIVE LAUNDERING. L. Auer and L. L. Balassa (to J. R. Geigy AG). USP 2 900 354, Aug. 18, 1959. (3633)

PRINTING POLYESTER FIBERS. J. Nüsslein, C. Kuch, and H. Bartl (to Farbwerke Hoechst AG). USP 2 901 311, Aug. 25, 1959. (3634)

Good results with dispersion dyes are obtained by incorporating polyhydric alcohols in the printing paste and drying at high temperatures.

FLUID BED DYEING PROCESS. F. G. Audas (to Brit. Rayon Research Assoc.). USP 2 901 312, Aug. 25, 1959. (3635)

Filaments, fibers, yarns, and sheets of synthetic material are dyed by passing them through a dyebath, padding the dye onto the material, and passing the material through a bed of hot, discrete particles while it is subjected to the action of an upward gaseous current.

LABORATORY PACKAGE DYEING MACHINE. H. Horsfall (England). USP 2 901 902, Sept. 1, 1959. (3636)

DYE STRIPPING SOLUTION. N. A. Matlin (to Rohm & Haas Co.). USP 2 902 453, Sept. 1, 1959. (3637)

The efficiency of an aqueous stripping bath containing a reducing agent is improved by the introduction into the bath of a water-soluble polymeric acid and a quaternary ammonium compound containing a hydrophobic substituent of at least 8 carbon atoms.

DYEING WOOL WITH COMPLEX HEAVY METAL COMPOUNDS OF MONOAZO AND AZO METHINE DYES. H.-R. Hirsbrunner (to J. R. Geigy AG). USP 2 903 324, Sept. 8, 1959. (3638)

The wool is pretreated in a hot bath containing sulfuric or phosphoric acid to obtain a pH of 4 to 5, the dye is added, and the dyeing carried out in a closed vessel under pressure at 110° C.

IMPROVING THE DYEABILITY OF SYNTHETIC FIBERS. C. W. Schroeder (to Shell Develop. Co.). USP 2 903 381, Sept. 8, 1959. (3639)

The synthetic fibers or fabrics are impregnated with an aqueous medium containing a polyepoxide and an amine curing agent and heated to cure the polyepoxide.

Mechanical processes D3

FABRIC ROLL LAP BOARD. S. Hanson (to Progress Box Ltd). BP 813 757, May 21, 1959. Through BCIRA 39: 2882 (1959). (3640)

A lap board for a roll of cloth is made by turning over one edge of each of two pieces of cardboard, lengthwise, placing them together face to face so that a turned edge comes at each side, inserting stiffening lengths of half-round molding along the sides and securing all together by layers of adhesive paper.

APPARATUS FOR HEAT SETTING FALSE TWIST IN HIGH-BULK YARN. L. Vandamme and L. Rouyer (to Moulinage et Retarderie de Chavanoz). USP 2 891 375, June 23, 1959. (3641)

The apparatus consists of a curved heater tube. Filaments are fed through the heater tube to a false twisting device. The twist is removed after the filaments pass the false twisting device.

DEVICE FOR HOT CUTTING OF WOVEN OR KNITTED FABRICS OF THERMOPLASTIC FIBERS. R. Jacob and B. Masson (to Soc. d'Applications Generale d'Electricite & de Mecanique). USP 2 894 106, July 7, 1959. (3642)

PILE THREAD CUTTING MACHINE. G. H. Sanders (to Graniteville Co.). USP 2 895 209, July 21, 1959. (3643)

Machine in which cutters and guides are so arranged that the floated portions of the threads in all of the ribs of a given fabric width are severed during a single passage through the machine.

FABRIC EXPANDING AND CONTRACTING ROLLS. J. D. Robertson (to Mount Hope Machy. Co.). USP 2 898 662, Aug. 11, 1959. (3644)

SEAM DETECTOR. R. D. Joy (to Pacific Mills). USP 2 900 468, Aug. 18, 1959. (3645)

Device for detecting the arrival of a seam in a traveling length of cloth during finishing.

CALENDER ROLL DRIVE. K. Zimmerli (to B. F. Perkins & Son, Inc.). USP 2 900 747, Aug. 25, 1959. (3646)

Mechanism for rotating the driven roll while it is disengaged from the driving roll, so that when the rolls are reengaged, the driven roll instantly assumes the speed of the driving roll.

Drying, setting, conditioning D4

FEEDING WOVEN MATERIAL TO A TENTERING MACHINE. G. Möhring (to Famatex GmbH). BP 812 729, Apr. 29, 1959. Through BCIRA 39: 2881 (1959). (3647)

Instead of feeding cloth to slower-moving tenter chains in order to create undulations (in a shrinking process) it is proposed to pass the cloth between an endless toothed belt and an indenting pulley with resilient rim, both moving at corresponding speeds, but slower than the feed roller.